# The Hunterian Oration.

*Delivered at the Royal College of Surgeons of England on Feb. 15th, 1897,*

BY CHRISTOPHER HEATH, F.R.C.S.ENG.,

PAST PRESIDENT OF THE COLLEGE; HOLME PROFESSOR OF CLINICAL SURGERY IN UNIVERSITY COLLEGE, LONDON; AND SENIOR SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

[AFTER some introductory remarks Mr. Heath said that previous Hunterian Orators had laid stress on the fact that John Hunter was a learned physiologist and a profound pathologist but had in some measure ignored the fact that he was also a great surgeon, and it would be his effort that day to set out this side of Hunter's character. He mentioned Hunter's apprenticeship to his brother-in-law Buchanan, when he acquired manual dexterity by working as a carpenter, his work as assistant to his brother William, when he trained his hand as a dissector, his work under Cheselden and Pott, his house surgeoncy at St. George's, and his short though important career as an army surgeon. Passing on to Hunter's return to London in 1763, the orator referred to the election to St. George's as surgeon in 1768 and to his course of lectures on the "Principles of Surgery," which commenced in 1774. Mr. Heath continued:—]

In his lecture on "Injuries of the Head," Hunter shows himself to be far in advance of his contemporaries, with whom trephining the skull was a matter of routine. He says: "In cases of fissure of the skull only it may admit of dispute whether we are always to trepan. If there is no symptom of an injured brain, certainly it will not be necessary. It may not be necessary even when attended with symptoms of an injured brain, for the injury may only be from the concussion, and we never trepan for concussion." Again he lays great stress upon the danger of opening the dura mater because of the occurrence of fungus cerebri, which was almost constant before the introduction of antiseptic dressings, and even now is not entirely unknown. He says, "whenever I have seen the dura mater opened the brain has worked through the opening, and the patients have died. This was the case with a Mr. Cooper, whose dura mater I opened with a crucial incision on account of the state of the parts beneath; he died, and I think it is probable I killed him by opening the dura mater." Mark the honesty of the man—"it is probable I killed him." Fashion reigned in Hunter's time as at present. Thus under the head of simple fracture we find him saying, "the position for the patient to lie in was formerly on the back, but the side is now generally adopted. However, I think its whole advantage is that it has the appearance of novelty, and is not a real improvement; but time will establish the truth." Again, in speaking of fractured patella, he says, "Before the year 1750 it was the practice to endeavour to bring the broken ends of the bones as near together as possible, with little or no motion allowed; but after that a fashion arose (for we have fashions in surgery as in everything else, arising perhaps from a person happening to do well who had not been treated in the old way) of letting the parts separate, and of not forbidding motion so strictly; but now caprice has, I believe, had its day, and we are taught by reason and experience that the parts should be, when cured, as nearly as possible in their natural situation."

Here, thanks to Mr. D'Arcy Power, I am able to avail myself of a little bit of contemporary criticism in the form of an "Essay on the Fracture of the Patella or Knee-pan, by John Sheldon, F.R.S., Professor of Anatomy in the Royal Academy of Arts, London, 1789." Mr. Sheldon combats the view that the extension of the leg relaxes the muscles attached to the patella, though, as he says, "those anatomists whose opinions I am acquainted with, as the late Dr. Hunter, Mr. J. Hunter, the late and present Professor Monro, and every other teacher or writer I have seen or heard of, have entertained the same opinion, though the contrary is evidently the case." He proceeds to argue that the thigh must also be flexed upon the pelvis, a practice which has been generally adopted for many years, so as to relax the rectus; but he also recommends slight flexion of the knee so as to relax the hamstrings—a useless and harmful proceeding.

In his lecture Hunter tells the story of a lady with an old fractured patella and great separation of the fragments, with consequent loss of power; and Sheldon speaks with approval of his plan of exercising the muscles of the thigh, by swinging the leg with weights attached to the foot. How both these surgeons would have appreciated my colleague Mr. Barker's simple plan of wiring the fragments together by the sub-cutaneous method!

John Hunter's name is so inseparably connected with the treatment of aneurysm that it is almost unnecessary for me to maintain his claims to originality in his operation of applying a ligature at a distance from the sac, particularly after the exhaustive lectures on the subject of aneurysm which were given in this theatre in 1871 3 by Mr. Holmes. The claims put forward by French surgeons, and particularly by Broca in his classical work on aneurysms, for Anel as the proposer of the Hunterian operation will not bear investigation; for it is clear that Anel really placed a ligature above the aneurysm, and in close proximity to it, and only differed from his predecessors in not laying open the sac. It is well known that this method and its varieties proved so fatal from secondary hæmorrhage that Pott, the leading authority of the day, recommended amputation as the only safe proceeding; and on this Hunter remarks in his lectures, "When the disease is in an advanced stage I agree with Mr. Pott in thinking amputation necessary and preferable. The earlier, therefore, the operation for the aneurysm is performed the better, not waiting with the expectation that an increased size of the aneurysm will produce an increased size of the collateral branches. If the artery, however, cannot be tied above the aneurysm in the operation, where can it be tied if the limb be amputated? Why not tie up higher in the sound parts where it is tied in amputation and preserve the limb?"

The first operation performed by Hunter for popliteal aneurysm, by ligature of the femoral artery in Hunter's canal, was in December, 1785, the patient being a coachman aged forty-five years. Sir Everard Home gives full details of the case in the *London Medical Journal*, vol. vii., 1786, and vol. viii., 1787, and also in the first volume of the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, which was published in 1793, during Hunter's lifetime. It is quite clear that the vein was included in the ligatures, which were four in number, two being tied and two kept in reserve. The patient recovered. Home gives four other cases operated on by Hunter, one of which was fatal; and on the fourth case it is remarked that "in performing the operation the vein was not included in the ligature," implying that previously the vein had been so included. In the museum of this College is preserved the preparation of this historical case (3258)—obtained by Hunter "with some trouble and considerable expense" on the patient's death, fifteen months after the operation—a drawing of which accompanies Home's second paper in the *London Medical Journal*, 1787. "The femoral artery was impervious from its giving off the arteria profunda as low as the part included in the ligature. Below this part the femoral artery was pervious down to the aneurysmal sac and contained blood, but did not communicate with the sac itself, having become impervious just at the entrance. What remained of the aneurysmal sac was somewhat larger than a hen's egg, but more oblong and a little flattened. It contained a solid coagulum of blood, which adhered to its internal surface. A section made of this coagulum appeared to be composed of concentric laminæ, uniform in colour and consistence. The trunk of the femoral vein where it passed along the side of the tumour must have been obliterated." Appended to the account of the dissection is the following remark:—"The conclusion to be drawn from the above account appears a very important one, viz., that simply taking off the force of the circulation from the aneurysmal artery is sufficient to effect a cure of the disease, or at least to put a stop to its progress, and leave the parts in a situation from which the actions of the animal economy are capable of restoring them to a natural state." We are not informed whether this statement of Home had the support of Hunter or not, but it is a little remarkable that no reference should have been made to the collateral circulation, which has such an important bearing upon the formation of laminated clot within an aneurysm.

Our museum contains also, thanks to the late Mr. Thomas Wormald, the specimen from Hunter's fourth case, in which the vein was not included in the ligature. The patient was thirty-six years old and survived the operation for fifty years. "The portion of artery obliterated by the ligature extends from the origin of the profunda downwards to the division of the popliteal. A small oblong mass of earthy matter occupies the situation of the aneurysm."

Of course, Hunter's new operation had a certain amount of opposition, notably from his colleague Bromfield and from Percival Pott; but we find in Home's paper that Mr. Lynn, of the Westminster Hospital, had a successful case, the date of which is not given. Hunter was cursed with a candid friend, one Jesse Foot, surgeon, who published the year after his death "The Life of John Hunter," in which he criticised severely the whole of Hunter's professional career; but it is remarkable that he makes no allusion to the operation for aneurysm.

Of the separate volumes which Hunter published the first was that on "The Natural History of the Human Teeth" and a "Practical Treatise on the Diseases of the Teeth," price £1 1s., 1778. The late Mr. Thomas Bell, F.R.S., himself a distinguished dental practitioner, as well as for many years Lecturer on Comparative Anatomy at Guy's Hospital, in the preface to Hunter's essay in Palmer's edition, speaks of the work thus: "If it may be stated that the work in question is perhaps the least felicitous effort of this extraordinary genius, and that of which the errors are the most obvious and striking, some apology may be found even for these in the confined nature of the subject and especially in the obscure and anomalous structure of the organs of which it treats; whilst the basis which his experiments and observations have laid for subsequent improvements in our knowledge, both of the physiology and pathology of the teeth as well as in the treatment of their diseases, constitutes a never-ceasing claim to the gratitude and admiration of every scientific practitioner of dental surgery."

Mr. Jesse Foot, surgeon, in "The Life of John Hunter," already mentioned, does not spare the author, but devotes no fewer than thirty pages to a detailed criticism of this work on the teeth, interspersed with remarks of a more or less scurrilous nature. Mr. Foot says, no doubt with truth, "John Hunter, at the time he published this book, had but very little practice, the whole circle being then filled up by names to which I have before alluded; and Hawkins, Bromfield, Sharpe, and Pott were proud and unaccommodating professional men. They were above submitting to consultations with dentists. Their patients, who wanted advice for relative complaints of the teeth, sent for or went to them, and from them took the instructions which the dentists were to obey. Hunter laudably condescended to accommodate himself to the necessity of the case, and to fill up this chasm in practice he placidly attended on fixed days and hours at the house of a dentist to aid him by consultation for the benefit of his patients." In Chapter IX., which treats of Drawing the Teeth, Hunter has to his caution against rapid extraction of the teeth appended the following note: "I must do Mr. Spence the justice to say that this method appears to be peculiar to him and that he is the only operator I ever knew who would submit to be instructed or even allow an equal in knowledge, and I must do the same justice to both his sons." Mr. Foot thereupon says: "John Hunter was not found to bestow his smiles upon every dentist; his sincerity in friendship confined him alone to the family of the Spences"; and then proceeds to give a personal recollection of the elder Spence dating from 1762, when he kindly extracted without fee a tooth from Mr. Foot, who was then an apprentice.

No doubt, as Bell has pointed out, Hunter made mistakes in his work on the teeth, particularly as regards the development of the second set and their relation to the temporary teeth. But the sections on gumboils, on excrescences from the gum, on deeply-seated abscesses in the jaws, and on abscess of the antrum maxillare show that he had considerable experience in the ailments connected with the teeth and their surgical treatment. His chapter on "Transplanting Teeth" shows how careful he was in dealing with all the details of such a delicate operation, which we know to have been highly successful in his hands, although eventually abandoned on account of the fear of transmitting syphilis.

In 1786 John Hunter published "A Treatise on the Venereal Disease," which excited a good deal of controversy at the time and has been freely criticised during the last fifty years. Hunter had no doubt seen a great deal of venereal disease whilst serving with the army both at home and abroad, though he seems to have ignored to a very great extent the labours of others in the same field of inquiry. His reputation as an anatomist and surgeon was so great that the work was received both at home and abroad with acclamation. In 1787, the year after publication, French and German translations appeared. In 1788 there was a second English edition, and in 1791 the first American edition was published. There were not wanting, however, contemporary critics, and foremost amongst them must be mentioned Benjamin Bell of Edinburgh and Mr. Jesse Foot, surgeon, to whom I have already referred. This last gentleman brought out a volume of 450 pages, in which he goes *seriatim* through Hunter's work, criticising as far as possible all his statements and speaking of him invariably as the "Professor," which he seems to regard as a term of reproach. Unfortunately, Hunter started with the idea that the poisons of gonorrhœa and syphilis were identical, and so early as 1767 made experimental inoculations upon himself with gonorrhœal matter, as he believed, but which, no doubt, was mixed with the discharge from a chancre within the urethra. A chancre and secondary symptoms resulted, for which mercury was taken, and, in his own words, "the time the experiments took up from the first insertion to the complete cure was about three years." After such a personal experience it is not surprising to find Hunter laying down explicitly: "The experiment proves that matter from a gonorrhœa will produce chancres." His critic, Foot, takes the same view, and says sarcastically: "I shall be glad to be informed by the Professor who ever doubted but that it [the poison] was the same!" It is the more curious that such an acute observer as Hunter should have fallen into such an error, for we find him laying down that "till about 1753 it was generally supposed that the matter from the urethra in gonorrhœa arose from an ulcer or ulcers in that passage, but from observation it was then proved that this was not the case." He proceeds also to show, by the examination of the bodies of criminals known to be the subjects of gonorrhœa at the time of execution, that the prevailing belief in the existence of warts or growths in the urethra in all cases of gonorrhœa was incorrect. Hunter seems to have had undoubting faith in the contradictory statements of his patients, and particularly of his female patients, the subjects of gonorrhœa. It is difficult otherwise to understand the conclusions he comes to, for they often appear to be entirely opposed to modern experience. His views also on swelled testicle do not commend themselves to the modern surgeon, for he held that the inflammation was due to "sympathy," and that the testicle "is never affected with the venereal disease, local or constitutional." However much in the present day we may disagree with Hunter in recommending a mercurial course for the treatment of gonorrhœa we must allow that he thoroughly appreciated the various affections of the urinary organs which commonly result from and follow that disorder. Still more valuable are the chapters on "Supposed Consequences of Gonorrhœa," disorders which have proved a happy hunting ground for the quack for many generations. Hunter's description "of the discharge of the natural mucus of the glands of the urethra" is brief but forcible: "The small glands of the urethra and Cowper's glands secrete a slimy mucus similar to the white of an egg, not coagulated. This seldom appears externally or flows from the urethra but during the indulgence of lascivious thoughts, and is seldom or never attended to except by those who are either under apprehensions of a gonorrhœa coming on, or imagine the last infection is not gone off entirely, and are therefore kept in constant terror by this natural discharge." He then passes on to speak of "the discharge of the secretions of the prostate gland and vesiculæ seminales," and expresses a strong opinion, in which modern physiologists agree, that the vesiculæ are not seminal receptacles. "It is a discharge of mucus," he says, "by the urethra which generally comes away with the last drops of urine, especially if the bladder is irritable, and still more at the time of being at stool, particularly if the patient be costive, for under such circumstances the straining or action of the muscles of these parts is more violent. It has generally been supposed that this discharge is semen, and the disease is called a seminal weakness; but it appears from many experiments and observations that the discharge is undoubtedly not semen." So highly do I appreciate John Hunter's good common-sense teaching on this important

subject that I have for many years kept this page in his works doubled down in order that I may read out an authoritative statement to those miserable persons who consult the surgeon from time to time for so-called "spermatorrhœa"—a word which one could wish eliminated from our language.

It is remarkable that the term "Hunterian chancre" should have been the universally accepted description of the primary syphilitic sore, for Hunter himself says: "Venereal ulcers have one character, which, however, is not entirely peculiar to them, for many sores that have no disposition to heal (which is the case with a chancre) have so far the same character. A chancre has commonly a *thickened base*; and although in some the common inflammation spreads much further, yet the specific is confined to this base." But what is most remarkable is that Hunter denied the existence of chancres on the mucous membrane of the vagina or cervix uteri, and *a fortiori* did not recognise such unusual occurrences as chancre of the lip, &c. Although the anatomy and pathology of the lymphatic system, including glandular enlargements, had made great progress during the previous century, yet the primary indolent bubo was not recognised as typical of syphilitic infection. Thus we find Hunter describing all kinds of buboes as occurring during the primary stage of syphilis, and even advocating the mercurial treatment of suppurating chancres and inflamed buboes.

From what has been already said it cannot surprise us to find Hunter's views of the lues venerea or constitutional syphilis little in accordance with the opinions of the present day. It will be sufficient to quote the following as regards the transmission of syphilis from parent to child. "It is supposed," says Hunter, "that a fœtus in the womb of a pocky mother may be infected by her. This I doubt very much. However one can conceive the bare possibility of a child being affected in the womb of a pocky mother—not, indeed, from the disease of the mother, but from a part of the same matter which contaminated the mother." Again, he says: "It has been supposed that such a contaminated child could contaminate the breasts of a clean woman by sucking her," and yet a little later he describes vividly enough the infection of a nurse by a syphilitic child. Yet with all these mistakes, which it has taken nearly a century to correct, we owe John Hunter a great debt of gratitude for his unfailing faith in mercury as the specific remedy for syphilis. So long as varieties of venereal sores were undistinguished mercury was, of course, often given unnecessarily and with disastrous effects; but if it had not been for Hunter it seems likely that the heresy which the Bells and other Scotch surgeons promulgated, that syphilis did not require mercury for its cure, would have made much greater way than it did. Thanks to the labours of Ricord, Hutchinson, and Hill, the diagnosis and treatment of syphilis are now placed on a firm basis; and if it had not been for the "shrieking sisterhood" and the action of a few effeminate Members of Parliament we might now be rejoicing in the reduction of venereal disease in our army and navy by those most beneficent laws known as the "Contagious Diseases Acts," which were unhappily wiped out by a weak-kneed Government just when they were conferring the greatest benefit upon suffering humanity.

The papers which John Hunter himself contributed to the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge were only two in number. The first was read on Feb. 6th, 1784, and was "On the Inflammation of Internal Coats of Veins." The frequency of phlebotomy gave rise, as he says, "to a very frequent complaint—that is, an inflamed arm after bleeding"; and he proceeds to show that this arose from the wound not healing by first intention. Numerous post-mortem examinations enabled him to state correctly enough that, as the result of inflammation of the lining membrane of the vein, in some cases adhesion of the coats and obliteration of the canal took place, whilst in others suppuration ensued and abscesses had to be opened, or led to the death of the patient by what we now term pyæmia. It is remarkable that Hunter does not mention thrombosis and does not appear to have recognised the formation of clot in the vein as an early stage of phlebitis.

In the treatment of phlebitis Hunter urges the application of a compress to produce adhesion of the surfaces of the vein; and though this can be but of little service it is noteworthy that he should have anticipated the proposal of Mr. Henry Lee to pass a pin beneath the vein, so as to prevent pus getting into the circulation, by upwards of seventy years. Nothing is more remarkable in the present day than the almost absolute safety which attends the removal of portions of varicose veins, as recommended by the late John Marshall, provided strict attention be paid to asepsis.

Hunter's second paper was read on Aug. 18th, 1789, and was "On Introsusception"—as it was spelt in those days. He says: "When the introsusception is downwards it may be called progressive, and when it happens upwards, retrograde"; and attributes the slipping of one piece of intestine within another solely to some additional weight in the gut above. Again, Hunter says: "The outer fold is the only one which is active, the inverted portion being perfectly passive and squeezed down by the outer, which inverts more of itself." Although these views are not received in the present day, the figures of two cases of intussusception which Hunter gives most accurately represent the disorder and could not be improved upon. His treatment is curiously dominated by his views as to the action of the outer fold of the intussusception, for he says: "Medicine can never come in contact with the outer fold," and he advises, therefore, giving vomits, "with a view to invert the peristaltic motion of the containing gut, which will have a tendency to bring the intestines into their natural situation." It is remarkable that neither inflation of the bowel from below, which dates from Hippocrates, nor the proposal of Praxagoras to open the abdomen and thus reach the seat of trouble, which in modern times has proved so successful, receives any mention in this essay.

John Hunter seems to have been the originator of the practice of feeding artificially through a stomach-tube. He read before the Society for the Improvement of Medical and Chirurgical Knowledge on Sept. 21st, 1790, "A Case of Paralysis of the Muscles of Deglutition, cured by an artificial mode of conveying food and medicines into the stomach." The patient was a man, aged fifty years, a hypochondriac who lost the power of swallowing, and was brought to Hunter for relief. Hunter proposed that a hollow flexible tube should be passed down into the stomach, and mentioned his having an instrument of the kind made of spiral wire covered with gut for the purpose of injecting liquids into the stomachs of animals. The plan was adopted and the patient recovered. The instrument used was a fresh eel skin of rather small size, drawn over a probang, and at the end of the paper it is observed: "An eel skin seems very well adapted for this purpose, being smooth, pliable, and readily passed into the stomach; but as cases of this kind may occur when eels cannot be procured a portion of the gut of any small animal, as a cat or lamb, will make a good substitute."

This same volume of the society's "Transactions" contains a paper by Sir Everard Home "from materials furnished by Mr. Hunter." It is entitled, "Some Observations on the Loose Cartilages found in Joints," in which the view is maintained that the cartilages originate in blood-clots rather than in the loose fringes of the joint. Hunter advises the removal of such bodies by an incision above and to the inner side of the patella, and describes graphically the extreme difficulty of the proceeding, owing to the tendency of the cartilages to escape into the cavity of the joint.

I have thus endeavoured to show by his own writings that John Hunter was an able and experienced surgeon as well as an unrivalled anatomist. That he had been for some years before his death the leading surgeon in London cannot be doubted, for even Mr. Jesse Foot allows this. He says: "I think I may affirm that his consultations were more in fashion than any other surgeon's, and that his range of practice was more extensive—that we heard more of the name of John Hunter than of any other surgeon." Evidence of this kind is better than that which nowadays is too often looked upon as the test of professional success—the amount of legacy duty. Hunter died a poor man, not because he did not make a large professional income, but because he spent all he made upon his museum. When he died in 1793 we find his influential friends exerting themselves to procure a grant for his widow from the Government of the day; and eventually in 1793 Parliament voted £15,000 for Hunter's Museum and placed it under the care of the Corporation of Surgeons. The Royal College of Surgeons of England, the successor of that corporation, cannot be said to have failed in its duty towards Hunter's collection, and the splendid series of museums which the College has erected during the present century show the interest taken

by the Council of this College in the promotion and advancement of the art and science of surgery.

[Mr. Heath concluded, according to custom, with an eloquent reference to those Fellows of the College who had died since the last oration—namely, John Whitaker Hulke, William Savory, Arthur Durham, John Eric Erichsen, George Murray Humphry, and Spencer Wells. His peroration was as follows:—]

And now, Sir, having completed the roll of the illustrious departed, let me conclude by saying a few words on my own behalf. In July my period of office as a Councillor of this College expires, and this is, therefore, the last occasion on which I shall have the right to address my colleagues and the College at large from this place. Gentlemen, I cannot but view the future of this College with some anxiety. This great corporation is, I fear, on the high road to become something very unlike the Royal College of Surgeons of England which has existed now for nearly 100 years. Hitherto it has been regarded as the home of surgical science and its funds have been devoted to the advance of the art of surgery by providing unrivalled opportunities for study in its museum and library. This College will, in my opinion, lose professional prestige and fall in public estimation if its funds should ever be diverted from these legitimate purposes in order to support the interests of individual members of the profession, however worthy in themselves. It will be a melancholy day for British surgery if ever this Royal College should become a gigantic Protection Society to fight the puny battles of its Members who may happen to come into collision with each other or with the public. It is to the Council, and to the Fellows who elect the Council, that we must look for the maintenance of that high professional position which this College has hitherto occupied and for the furtherance of the art and science of surgery—*quæ prosunt omnibus artes.*

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ABSTRACT OF

# An Oration

ON

# WILLIAM HUNTER (1718-1783),

ANATOMIST, PHYSICIAN, AND OBSTETRICIAN.

WITH NOTICES OF HIS FRIENDS,

CULLEN, FOTHERGILL, SMELLIE, BAILLIE, ETC.

*Delivered on Feb. 10th, 1897, before the Hunterian Society*

BY R. HINGSTON FOX, M.D., M.R.C.P. LOND.,

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[AFTER the customary words of address to the President and Fellows Dr. Hingston Fox referred to the practice in vogue in the eighteenth century of leading medical men advertising their lectures in the ordinary newspapers of the day, and quoted an example of one inserted by William Hunter. The date of this, his first, was 1746. He then briefly referred to Hunter's family, his youthful days, and his friendship with Cullen. He spoke of Hunter's entry into London, where he made the acquaintance of Smellie, Dr. James Douglas, and Nicholls of St. George's Hospital. Dr. Fox continued: "It is as anatomist, physician, and obstetrician that I desire to bring Hunter before you this evening." The orator then gave a short account of the leaders in medical science at the time he spoke of—such as Richard Mead, Sir Hans Sloane, Cheselden, Pott; and, abroad, Boerhaave, Haller, Morgagni, and Linnæus. He continued:—]

William Hunter in 1747 became a member of the Corporation of Surgeons. In the next year he travelled on the Continent with young Douglas, going through Holland to Paris, and visiting some of the medical schools. In particular he went to see Albinus, one of the greatest of Boerhaave's pupils, who held the chair of anatomy at Leyden for the long term of fifty years. Here he saw some of the injected preparations for which that anatomist was famous, and was led to use this method of investigation in his own future work with signal success.

In 1748 his youngest brother John, ten years his junior, came up to London, fired, it would seem, by the same desire of a larger field for his energies. He wrote to offer his services to William as an assistant in his dissecting room. William replied with a kind invitation to visit London. John Hunter became at once his brother's pupil and assistant and was inducted by him into the anatomical studies in which he was to spend most of his life. He soon showed great skill in dissecting and injecting specimens and assisted his brother in many of his researches in anatomy and physiology, making discoveries more or less in conjunction with him. These, as we shall see, were afterwards a fruitful source of dispute between them. For several years after John came to London his elder brother sought to direct and help him in his studies, placing him under Cheselden and under Pott. He even tried to give him what he had himself enjoyed—a university training—but John's stay at Oxford was very brief and to little purpose, and he referred very ungraciously in after life to the efforts that had been made on his behalf. Indeed, it must be acknowledged that the younger brother gave during these early years little comfort or satisfaction to his friends. His manners were rough and coarse and his associates low. Indications of this occur in the letters which have been preserved. The dispositions and training of the two brothers were so different that it is hardly to be wondered at that they diverged as time went on. William, with his culture and polite instincts, had a trait of strictness and severity in his character, although he was kind at heart. Yet he refers often to his brother John in his lectures and in his medical commentaries in appreciative terms. And it was principally through William's powerful interest that John was elected to his most important appointment in the year 1768—that of surgeon to St. George's Hospital. John once sent him a patient with the following laconic note: "Dear Brother,—The bearer is very desirous of having your opinion. I do not know his case. He has no money and you don't want any, so that you are well met.—Ever yours, JOHN HUNTER."[1] John left his brother's laboratory in or before 1761, going abroad on account of his health as a surgeon in the army, and was succeeded by Hewson, a very able young anatomist with whom after some years William disagreed, and Cruikshank was engaged in his place in 1770. Hewson made important researches into the lymphatic system, discovering the existence of these vessels in birds and fishes, and demonstrating the human lymphatics with a fulness hitherto unattained. He died at the age of thirty-four years; his works have been published by the Sydenham Society. A curious letter is extant from Benjamin Franklin, who, during his stay in England, lodged at one time with William Hunter and Hewson, and "as a common friend had been obliged to listen to their mutual complaints." He writes to William Hunter in 1772 to give evidence as to the terms of agreement between them.[2]

In 1750 William Hunter received his degree of Doctor of Medicine from Glasgow University, gave up surgical practice, and left the hospitable roof of Mrs. Douglas to take a house in Jermyn-street, where he practised as a physician. By this time he had made various communications to the Royal Society; the first was as early as 1743, when he was but twenty-five years old, on "The Structure and Diseases of Articular Cartilages." At that time, and, indeed, throughout the eighteenth century, papers on medical subjects were laid before the Royal Society in large numbers. He was elected a Fellow 1767, in the same year as his brother. It may be added here that in 1768, on the foundation of the Royal Academy by Joshua Reynolds, Gainsborough, and others, Dr. Hunter was appointed its first Professor of Anatomy. A painting in the Royal College of Physicians of London, of which he became a Licentiate in 1756, represents Hunter lecturing to the members of the Academy. In his practice Hunter had come to turn his attention especially to midwifery, and he had been appointed man-midwife to the Middlesex Hospital in 1748 and surgeon-accoucheur to the British Lying-in Hospital next year. In this branch of medicine his reputation constantly grew, until in the year 1762, when he was forty-four years of age, he was called in to see the young Queen of George the Third. The story is told that the King asked him when he came out of the

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[1] Life of Mr. Baillie, prefixed to Wardrop's edition of his works.

[2] Hunter-Baillie MSS., i., 126.

chamber what ailed Her Majesty, and that he replied, "The Queen is *with bairn*." I have not found any written authority for this story. In any case, his attendance gave much satisfaction, and he was two years later named as Physician Extraordinary to the Queen, and from this date his practice amongst the upper classes rapidly increased. Hunter's polished manners and refinement, coupled with much shrewdness and a careful attention to his patients, made him a *persona grata* with persons of rank, whether by title or talent. The letters existing prove that he was on terms of easy acquaintanceship with many of the nobility, such as the Earls of Chatham and Rockingham, Lord North and Lord Bute. Horace Walpole writes to him in 1773 to promise him Lord Orford's "original"—an American Moose deer.[3]

Hunter's character is placed in a favourable and interesting light by some letters which passed between him and the Earl of Suffolk, whose lady he had attended at her death in childbed in 1767. Lord Suffolk had addressed to Dr. Hunter a letter full of the most affectionate gratitude for his attention and help: "My busyness is to beg of you, if *Reward* is an irksome word, to let me substitute *Regard* in its room." Dr. Hunter, after warmly thanking Lord Suffolk for his letter, continues: "I am now by your Lordship's kind sympathy as happy as I can be after taking such a share in so great a calamity. I feel an inclination to say a thousand things which I must suppress. I wish to talk upon a subject which you must forget. We will take it up in Heaven. At this moment I fancy that I have a Friend there who listens to my thoughts and bids me say to you in a little time we shall all be happy again; who bids me tell you to take care, for her sake, of yourself and of your child. Allow me to love your child all the days of my life; she will be exactly what you describe and what you wish. Allow me sometimes to see her, that I may indulge a pleasing melancholy and fancy that I am doing something very agreeable to Heaven. It may be preparatory to some exalted enjoyment there. Allow me likewise to offer your Lordship the best advice I can. As soon as possible do a force to nature and go into the busy world again. Nothing but that, I think, can restore your peace of mind and make you what I am sure you wish to be, a Blessing to Mankind. May you yourself be blest, both for your own sake and for loving so tenderly one so worthy of all your affection."[4]

[Dr. Fox then gave an account of Hunter's museum and proceeded:—]

He sought, but sought in vain, to construct on the basis of this museum and his lecture classes a national school of anatomy. He was ready to erect the building and to endow it with the sum of £7000. But his application in 1765 to the Government of the day to grant a site was unheeded, and the golden opportunity which might have done much for British medicine was suffered to pass by. It was a bitter disappointment to Hunter, and although Lord Shelburne sought as an individual to undo the ill act of the Cabinet, and offered to head a subscription list with a promise of a thousand guineas, Hunter's pride would not stoop to accept it. He turned to rely upon his own unaided efforts. A plot of ground was purchased in Great Windmill-street, near the present Piccadilly-circus, and here in 1770 he built a spacious house, containing a large room for his museum, a lecture theatre, and dissecting-rooms, besides rooms for his own residence. Here he lived and taught for the remaining thirteen years of his life. The house was afterwards occupied by his nephew, Dr. Matthew Baillie, and it was there Joanna Baillie began to write her dramas; it still stands, a plain red brick structure, somewhat altered, the portico gone, and the building now incorporated in the Lyric Theatre.[5] Hunter was a keen and jealous controversialist, laid exaggerated stress upon his discoveries, and was too sensitive of his own fame as an original worker. He was conscious of this weakness—an inordinate love of controversy, and condoned it on the plea that the passive submission of dead bodies rendered anatomists impatient of contradiction.

[3] Ibid., 128.

[4] Ibid., pp. 102-104. Henry, twelfth Earl of Suffolk, was K.G. and Secretary of State for the Northern Department. The story of his deep attachment to his wife and sorrow for her early death, of his devotion to the child named after her, and of her death at eight years is a pathetic one. He married again later, but it was not like the first love. He died before the age of forty years. I have to thank the Countess of Suffolk for her courtesy in supplying information.

[5] The house of John Hunter on the east side of Leicester-square, containing his lecture theatre, dissecting-rooms, &c., is at the present time about to be absorbed by the Alhambra Music-hall, which adjoins it.

[Dr. Fox then mentioned the two great controversies of Hunter's life, that with the Monroes with regard to priority in the discovery of the tubuli testis, and the bitter dispute with his brother as to the double circulation in the placenta.]

An estrangement resulted between William and John and they scarcely met again. After Haller died Hunter was chosen, in 1782, to occupy his place as one of the eight Foreign Associates of the French Academy—perhaps the highest foreign honour a man of science can obtain. Haller's seat had been occupied before him by Morgagni, and before him by Ruysch. On this occasion the chymists, one of the eight classes into which the Academy was divided, wished to have Bergman, the Swedish chemist, elected, but the class of anatomists insisted that it was their right to appoint a foreign associate, and Hunter was chosen.[6] We do not find that Dr. Hunter took much part in the political events of his time, nor did John Hunter on his part. A letter to a friend, written in 1778, five years before his death, concludes: "I told you that I have taken my leave of Politics: and am sorry to say that as far as I am a judge this country deserves humiliation, or rather a scourge. God bless you.—WILLIAM HUNTER."[7] The times, indeed, looked dark and threatening. Great Britain was at war with the United States and with France, and Spain was just declaring war against us. The long contest in Hindostan was in its early and more doubtful stages. At home there was trouble and discontent. And who that could have foreseen the prolonged struggles that were to come during nearly forty years would not have lost heart for the future of our country? Yet through all the staying power of the Anglo-Saxon race proved equal to the strain. William Pitt became Prime Minister in the year that Hunter died.

Ten years before his death, despite his frugal manner of living, Dr. Hunter began to suffer from "wandering gout," affecting, we are told, sometimes the limbs and sometimes the stomach. His bodily powers, strained by incessant exertions which he would not relax, gradually waned, but the spirit was active and undaunted to the end. On March 20th, 1783, he rose from his sick-bed, against the remonstrances of his friends, to deliver the introductory lecture of his course—an occasion when there was a large and more general audience. Towards the end of the lecture he fainted and had to be carried from the theatre. He never rose again, but died quietly, a few days later, on March 30th. John Hunter came to see him again and again in his illness and gave him needed surgical attention (catheterism). The brothers were reconciled at last, for dividing lines belong to life. As it has been finely said: "It is death alone which integrates." He died in peace. "If I had strength enough left to hold a pen," he said to Dr. Charles Combe, his executor, "I would write how pleasant and easy a thing it is to die." William Hunter was only sixty-five years of age, the same age attained by his brother John ten years later. Both died in the fulness of their work, closing a life of strenuous labour. So died their nephew, Matthew Baillie; so died many other masters in our art, from the days of Sydenham and of Radcliffe down to those of our own Wilson Fox and Andrew Clark. He was buried in the rector's vault of St. James's, Piccadilly, where his monument stands between those of Sydenham and Richard Bright.

[Dr. Fox then went on to speak of Hunter in the triple *rôle* of anatomist, physician, and obstetrician. With regard to the first of these "persons" he quoted from letters showing that Hunter was a close student of nature. He mentioned the discovery of the tubuli testis, the lacrymal ducts, the origin and use of the lacteals and lymphatics, the mode of formation of congenital herniæ, the anatomy of aneurysms, the placental circulation, the nature of the fœtal coverings, especially the decidua, and, above all, the anatomy of the gravid uterus. The Great Windmill-street School was referred to and stress laid upon the fact that William Hunter shone, not only by his own glory, but by the light reflected from his celebrated brother and pupil, John. Dr. Fox continued:—]

In speaking of William Hunter as a physician I use the latter word in no restricted sense. Perhaps the departments of medicine were not then so strongly marked out from one another; at any rate, Hunter took no narrow view of his profession. He began his medical life as an anatomist, practising surgery the while; then he took a physician's

[6] MS. letter to W. Hunter, announcing this honour, in possession of Miss Hunter-Baillie.

[7] Letter in possession of Miss Hunter-Baillie.

degree and finally devoted himself chiefly to the practise of midwifery. Nothing, indeed, that came within the scope of medicine in its widest sense was foreign to his mind. He made many contributions to the six volumes of "Medical Observations and Inquiries," published between 1757 and 1812 by that "Society of Physicians" which was the precursor of the Medical Society of London and is often confounded with it. Hunter succeeded his friend Fothergill as president of this society. Several of the papers relate to aneurysm and to his discovery of varicose aneurysm, others to the advisability of operating in empyema when there is no more than a reasonable probability of finding pus, to necrosis of the tibia and the nature of callus, and to rupture of the capsular ligament in dislocations at the shoulder. There is one very careful and elaborate record of a case of traumatic emphysema, in which the cellular tissue of the whole of the body was inflated with air.[8] The patient was *in extremis*, but Hunter, by suitable incisions, pressing the air out, and stopping the injured thorax, succeeded in effecting a cure. He goes on to expound the nature and functions of the cellular tissue and the use of punctures in anasarca; these should be very small, rather than large, as he had learned by trial of both these methods, one on each leg of the same patient. He had dissected black cattle, dead from an epidemic disorder attended with emphysema. Other papers deal with the structure of the symphysis pubis and the insensibility of tendon.

[After referring to two papers of Hunter upon congenital heart disease, wherein Hunter certainly foreshadowed the doctrine of evolution, the case quoted by Watson of the boy with anorexia, and a medico-legal paper upon child murder, Dr. Fox passed to consider Hunter's friends, Cullen and Fothergill, and also his nephew Baillie. Of Hunter as an obstetrician he said:—]

I pass on to speak of William Hunter as an obstetrician. The art of midwifery was passing in the middle of the eighteenth century through a severe struggle. When Smellie settled in London in 1739 the bulk of the practice was in the hands of midwives. Mrs. Nihell of the Haymarket, who afterwards published a treatise on the subject, had a large practice, and was a doughty and uncompromising champion of the exclusive right of her own sex to practise the art. Between her and Smellie, who lived hard by in Pall Mall, there was unceasing war. There were, indeed, men physicians devoted to this art, but when they were called in it was often only to advise the midwife, the patient not permitting herself to be touched. When William Hunter attended the young Queen of George III. he merely waited in an ante-room in case the midwife needed his assistance. The principal men-midwives when Smellie and Hunter began to work were Dr. Maubray and Sir R. Manningham. Of the former it need only be mentioned that he stated a decided preference for a seven months' term over a nine months' gestation on account of the influence of the moon and the mystical value of the number seven. Manningham was of a higher order and long enjoyed the chief reputation in London, where he founded the first maternity institution. He detected the imposture of Mary Tofts, the "rabbit-breeder." Yet so far was the art in its infancy that in his Compendium, published in the year that Smellie commenced practice, no mention is made of any sort of instruments. Instruments, however, were in use, but mainly of a destructive kind, and it was Smellie's earnest desire to find better methods, so that in difficult cases the child's life should not be sacrificed, that brought him to London.

[Here Dr. Fox gave a short account of Smellie and continued:—]

William Hunter was for many years the acknowledged leader in obstetric practice in London. In dealing with his claims to distinction in this department I am glad to be able to quote one who wrote with authority, the late Dr. Matthews Duncan. In his "Researches in Obstetrics" Dr. Duncan quotes Dr. Hunter many times; for example, on the inclination of the axis of the uterus, the plasticity of the uterus adapting itself to the shape of the fœtus, the condition of the cervix during pregnancy, the cause of the fœtal head being commonly downward, the especial development of the cephalic end of the fœtus, the posture of the child during the last months of gestation, the early implantation of the placenta over the cervix, the separation of the fœtal from the maternal portion of the placenta in a four months' conception, and the operation of symphysiotomy.

Smellie acknowledges the help derived from Hunter's "reforming the wrong practice of delivering the placenta"—i.e., leaving it more to natural efforts. And Hunter's lectures, preserved to us in the notes of students, bear witness to his thorough grasp of the practical issues of his art. He describes, for instance, clearly and simply, the occurrence of fever, convulsions, white leg, hemiplegia, &c., in the puerperal state, and his treatment, if rather conservative and inactive, is at any rate free alike from active hurtfulness and from a pretence of specifics.[9] Hunter described the retroversion of the gravid uterus apparently for the first time, and proposed the name by which the displacement is now known. His papers on this subject are very clear and interesting.[10]

A few words remain to be said on William Hunter's personal character. His many-sided tastes have been referred to. It is wonderful, perhaps, that they did not hinder him from attaining high distinction in his own profession. But he had no wife or child, and his museum was the recreation of his leisure hours. A man of untiring industry, an early riser, exact and orderly in his habits, thoughts, and speech, he combined the learning of a scholar with the refined manners of a gentleman. He was kind and he was just; and if he was so conscious of his own abilities and so sensitive to praise or blame that he sometimes appeared jealous, sometimes even bitterly combative in his attitude to others, such feelings did not long disturb his peace of mind. "I am, I believe, one of the happiest of all men," he writes to Cullen in 1768, "though my hurry is somewhat greater than I could wish."[11]

I have thus sought to set William Hunter before you as a great anatomist and a sound and successful practitioner of medicine and of midwifery.

"Verax: capax, perspicax: sagax, efficax: tenax."

A teacher of renown and wide influence, he contributed greatly, with his brother, John Hunter, to establish medical science and art upon the only sure foundation, that of anatomy. May we not rightly speak of "the era of the Hunters" and associate the two brothers together in the great work they did for natural science?

[Dr. Fox concluded by a *résumé* of the scientific work of the time, and ended his address by thanking those who had given him assistance by placing at his disposal the various manuscripts, books, &c., which he had used in preparing it.]

[8] Medical Observer and Inquirer, ii., p. 17, and iii., p. 372.

[9] MS. Lectures 42, b. 34, Royal College of Surgeons of England.
[10] Medical Observer and Inquirer, iv., p. 400, and v., p. 38.
[11] Life of Cullen, i., Append.

BIRKENHEAD MEDICAL SOCIETY.—A meeting was held on Feb. 12th, the President (Dr. R. Sydney Marsden) in the chair. — Mr. S. Wilkinson opened a discussion on Hypnotism in an able paper, giving some interesting details of his own experience, and in the subsequent discussion the following members took part — Dr. Pinkerton, Dr. Brien, Mr. Harrington, Dr. McSwiney, and the President. — Mr. Wilkinson replied.

ROYAL LUNATIC ASYLUM, ABERDEEN. — The report by Dr. William Reid, physician and superintendent of this asylum for 1896, states that on Jan. 1st last year there were 741 patients on the register: admitted during the year, 207; discharged, 157 (recovered, 95; relieved, 33; not improved, 29); died, 55—leaving at Dec. 31st, 736, including 5 absent on probation. A great many of the cases admitted were in indifferent physical condition, and several of them exhibited symptoms of incipient phthisis. The percentage (45·9) of recoveries to admissions is higher than for many years. Dr. Reid calls attention to the large number for this asylum of deaths from general paralysis and from phthisis. The new hospital (opened on Aug. 3rd) promises fully to realise expectations. The ventilating and heating system have proved satisfactory, and the electric lighting is for asylum requirements a decided advance. The income amounted to £23,342 and the expenditure to £23,435. In all 948 cases were under treatment last year, and the directors are to hold in the spring of this year a conference with Her Majesty's Commissioner in Lunacy as to the re-construction of the main asylum.

ABSTRACT OF

# The Hunterian Lectures

ON

# THE PATHOLOGY AND SURGERY OF INTUSSUSCEPTION.

*Delivered at the Royal College of Surgeons of England,*

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## LECTURE III.[1]

*Delivered on Feb. 12th.*

### THE TREATMENT OF INTUSSUSCEPTION.

TURNING from the theoretical to the more severely practical aspects of intussusception, there can be no doubt that all cases of the affection have to be treated upon the assumption that they are either reducible or irreducible. I do not propose to occupy your time with a history of the treatment of intussusception. Those who are interested in such matters will find that Professor Ashurst,[2] Dr. Leichtenstern,[3] and Mr. Jonathan Hutchinson,[4] have published admirable summaries of it from different points of view. It is still necessary, however, to teach the majority of mothers that early advice and abstention from domestic remedies are required in all cases of painful constipation occurring suddenly in young children, just as it is only lately that men, as well as women, have come to understand that the immediate treatment of strangulated hernia means recovery, whilst to delay is death. It is evident, indeed, that we are tracing in this century the exact course which our predecessors in the last century had to follow in regard to the treatment of hernia. Obstinate and ignorant people exist now as they did then, who would treat an intussusception with the same masterly inactivity as their ancestors treated hernia, and upon the identical plea that such a line of treatment yields a few spontaneous recoveries.

*a. Reducible intussusception.*—Clinical and pathological evidence show that an invaginated portion of the intestine has a constant tendency to reduce itself until its muscular coat becomes paralysed or adhesions are formed at its neck. This tendency to reduction is probably counteracted during the earlier stages of an intussusception by the tonic contraction of the ensheathing bowel, for if this be reduced or abolished by mechanical or other means the intussusception can be easily reduced until hardly any invagination remains. Inflation or injection of the large intestine is, upon the whole, the safest and the most satisfactory treatment for all cases of uncomplicated intussusception, provided that the patient has been seen early enough, that the distending force be applied gradually, and that it be not too great.

*b. Treatment by irrigation.*—Injection is preferable to inflation because the force employed can be graduated with much greater accuracy, whilst the apparatus is always at hand. But irrigation is not of the least service in the enteric form of intussusception, where one part of the small intestine is invaginated into another; for many observers[5] have shown by experiments on living and on dead bodies that fluid can only be made to pass through the ileo-cæcal valve when over-distension of the colon has caused a mechanical separation of its two segments. Such an over-distension, however, is in the highest degree dangerous, because it is usually accompanied by a cracking of the serous coat of the large intestine, which is soon followed by rupture of the muscular and mucous layers if the force be continued. The method of irrigation under hydrostatic pressure is the most satisfactory way of distending the colon in cases of colo-colic and ileo-cæcal intussusception. The fluid is allowed to pass into the large intestine by its own weight, so that the force can be accurately estimated by observing the height to which the reservoir is raised above the recumbent body of the patient. The valuable experiments of Mr. Mortimer[6] in London and of Mr. Mole[7] in Bristol have greatly increased our scientific knowledge of the effects of irrigation in the treatment of intussusception. They have shown that the results depend partly upon the obstruction to be overcome within the intestine and partly upon the external support. The greater the pressure within the abdomen the more is the distending force neutralised, for the intestinal wall is then compressed between two opposing forces. There is apt to be cracking of the serous coat of the large intestine when the resultant pressure of the fluid distending the colon is about two and a half pounds per square inch—that is to say, when the irrigator is raised five feet above the body of the patient, and this accident usually happens when the irrigator is raised to eight feet, though the bowel may be completely ruptured when the reservoir is only raised to a height of six feet. Rupture of the large intestine is most likely to occur in the transverse colon at or near the splenic flexure, whilst in the small intestine it takes place in the unprotected portion of the bowel which is situated between the two layers of the mesentery. It is impossible for the surgeon to estimate the capacity of the colon in any individual case of intussusception, nor can he judge the amount of pressure that may be applied with safety to the inflamed and softened intestinal wall at the neck of the tumour. A pint of fluid was sufficient to rupture the bowel in a child,[8] aged three months, though the injection was made by one of the most careful and experienced surgeons in the profession. Dr. Muir, at my instigation, has measured the capacity of the colon in the bodies of several children, and the measurements show how widely different is the capacity of the colon in different children of almost the same age. Thus in a male child aged five months ten ounces of water were sufficient to distend the colon, whilst in a girl aged seven months thirty ounces could easily be passed into the large intestine. Forty-eight hours is the limit of time within which irrigation is likely to be successful in an ordinary case of ileo-cæcal intussusception with tolerably acute symptoms, and such pressure is alone justifiable in a child aged two years as can be obtained by raising a reservoir of water containing a quart of salt solution at 100° F. two and a half feet above the anæsthetised patient. I do not think that inversion of the patient renders irrigation more successful, but I am satisfied that long-continued distension under a low pressure is of more avail than rapid dilatation under a high pressure. The surgeon should keep one hand flat upon the abdomen whilst irrigation is being performed, and he must carefully avoid great variations of pressure. A sudden and uniform enlargement of the whole abdomen during the irrigation raises a strong suspicion that the bowel has been ruptured. A laparotomy must be done at once when this accident happens, and the seat of rupture should be looked for either on the left side of the abdomen or at the neck of the intussusception. The length of the intussusception is no bar to its reduction by irrigation, for many cases are recorded in which an intussusception has been reduced even when the ileo-cæcal valve has protruded beyond the anus.[9] A chronic case with a great deal of glairy discharge, the onset of which has been heralded by similar attacks of less intensity, may be treated by irrigation a very much longer time than is allowable in ordinary cases; indeed, some cases[10] of this nature have been cured when the symptoms have lasted from four to six months. The duration of the symptoms is perhaps always of less importance in an intussusception than their intensity. The longer the time the symptoms have lasted, however, the more likely it is that adhesions will have been formed. Slight adhesions are not an insurmountable barrier to reduction by irrigation, though they militate greatly against its success as Professor Senn's[11] investigations showed.

A great disadvantage attends the use of irrigation for the cure of intussusception apart from the danger of rupture. This disadvantage is the liability to recurrence after

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[1] Abstracts of Lectures I. and II. appeared in THE LANCET of Feb. 13th.
[2] American Journal of Medical Science, July, 1874, pp. 48 and 285.
[3] Ziemssen's Cycl. Pract Med., vol. vii., p. 643.
[4] Transactions of the Royal Medical and Chirurgical Society, vol. lvii., 1874, p. 37.
[5] Bull: Virchow's Jahresbericht, xi., 1878, p. 205. Heschl: Wiener Medicinische Wochenschrift, 1881, No. 1. Debierre: Lyon Médical, 1885, No. 45. Senn: Intestinal Surgery, Chicago, 1889, p. 221. Mole: Bristol Medico-Chirurgical Journal, vol. xii., 1894, p. 65.
[6] THE LANCET, May 23rd, 1891, p. 1144.
[7] Bristol Medico-Chirurgical Journal, xii., 1894, p. 65
[8] Transactions of the Clinical Society, vol. xxi., 1888, p. 244.
[9] Brit. Med. Jour., vol. ii., 1896, p. 629.
[10] Max Bauer, Berliner Klinische Wochenschrift, No. 33, 1892, p. 817.
[11] Intestinal Surgery, p. 154, Experiments 15 and 19.

reduction. Dr. F. H. Elliott[12] has published the details of a case of recovery from intussusception in a child, aged eight weeks, in whom recurrence took place twenty-four hours after the first reduction, five days after the second reduction, and thirteen days after the third reduction. Dr. Chaffey[13] had a less satisfactory experience, for an intussusception recurred on five separate occasions until the patient—a boy aged three years—died from exhaustion. When recurrence is a very marked feature in a case it is better to open the abdomen at once rather than to trust to repeated irrigation of the bowel, for it appears[14] that re-invagination can positively be prevented by shortening the mesentery at the point of invagination by folding it upon itself in a direction parallel to the bowel and maintaining it in this position by a few catgut sutures. No absolute rule can be laid down, however, for a child is now under my care who has apparently been cured of an intussusception, though irrigation had to be done on five separate occasions before the tendency to recurrence was overcome. A second objection to this method of treatment lies in the fact that the operator cannot see what he is doing. The reduction is, therefore, incomplete in some cases, for the last part of an intussusception is the most difficult to unfold. Cases are well known in which such an incomplete reduction has been found at the necropsy.[15] The ileo-cæcal valve, too, is sometimes a cause of trouble after the reduction of an intussusception, theoretically because a hæmorrhage into its substance may make its segments gape, or may so stiffen them as to predispose to a fresh invagination of the ileum, practically because it may be mistaken in its inflamed state for the tumour of an intussusception.[16] The after-treatment of an intussusception which has been cured by irrigation must consist in keeping the patient absolutely at rest, in the administration of opiates, and in feeling the abdomen gently from time to time to ascertain that the tumour has not recurred.

*c. Treatment by Abdominal Section.*—When irrigation has failed to relieve an intussusception the method must not be continued for too long a time, because the patient may become collapsed, even though no injury be done to the bowel. Abdominal section must then be performed at once, and this forms the second great method of treating intussusception. The failure of irrigation, because it leads to the necessity for laparotomy, increases the surgical interest of the case tenfold, but unfortunately it adds greatly to its gravity; for whilst the mortality of intussusception in infants treated without operation is calculated in the latest series of tables at 59 per cent., the mortality amongst the cases in which the abdomen had been opened is 67·2 per cent. Dr. Wiggin,[17] who appears to have compiled these statistics with great care, explains that this high rate of mortality is due to the inclusion in his tables of all cases in which laparotomy has been performed. The risk of abdominal section is reduced to 22·2 per cent., if only those cases be reckoned which have been operated upon within forty-eight hours of the onset of the symptoms and if we only take into account the cases which have been submitted to operation since the year 1889, when the more perfect technique of abdominal surgery has become generally known. Such an estimate, however, is based necessarily upon published cases, and is probably inaccurate, for no record has been kept of many unsuccessful operations.

Shock is the great and immediate cause of danger in every case of abdominal section performed upon a young child for the relief of an intussusception. Chilling of the body, bleeding, and powerful nerve stimuli ascending to the spinal cord from the splanchnic region, are the causes of shock, and they should be reduced to a minimum. Chilling of the body is easily prevented by placing the patient upon a hot-water bed and by swathing the arms and legs in cotton-wool, whilst the chest is covered with a roughly-made jacket of Gamgee tissue. The subcutaneous injection of one-fiftieth of a grain of strychnine, with enemata of brandy and hot water, will cause a temporary rally lasting long enough for a simple abdominal section to replace a piece of invaginated intestine in a child, though in a long operation these measures must be repeated more than once. The anæsthetic should be given sparingly. The incision should be made in the middle line, and at first it should only be long enough to admit two fingers and a thumb into the peritoneal cavity, for in the simplest cases it is unnecessary to drag the intestine to the wound. Indeed, it is better not to do so, because such a proceeding stretches the mesentery, and so stimulates the nerves that the splanchnic vessels are first contracted and afterwards dilated, leading to as great a lowering of blood pressure as would be caused by a very serious hæmorrhage. The less the intestine is handled, therefore, the better it will be for the patient, but it is much better to enlarge the incision and to bring the tumour into view if there is any difficulty in reducing the intussusception rather than to run any risk of tearing the serous coat by manipulating the intestine in too cramped a space. Rapidity combined with caution is the golden rule in all cases of abdominal surgery, and if it be followed in these cases the operation of laparotomy, even in a young child, is no more dangerous than is the ordinary operation for the relief of a strangulated hernia in an adult. The mortality rate of 22·2 per cent. applies more especially to this class of cases, and though it is still far too high we may hope that, as time proceeds and the cases are seen earlier, it will be still further and very greatly lowered. Washing out the peritoneal cavity is wholly unnecessary in the simpler cases; it lengthens the operation and increases the shock without yielding any adequate result.

An intussusception sometimes recurs after it has been reduced, but recurrence is less usual after an abdominal section has been done than when reduction has been brought about by irrigation. In a few cases[18] the intestine has remained so œdematous that the tumour has been felt even after the wound has been closed, leading the operator to suppose that invagination had recurred. Such a condition may be distinguished from true recurrence by the fact that the swelling rapidly disappeared and with it the symptoms of obstruction. There is another condition equally uncommon in which after an abdominal section has been done and the intussusception has been reduced the patient passes one or two healthy motions and seems to be on the highway to recovery, but within a few hours or days he again becomes constipated, his abdomen becomes distended with flatus, and he dies. A case of this kind recently came[19] under my care in the person of a boy aged eight months who had suffered for thirteen and a half hours from symptoms of intussusception. Irrigation failed to reduce the intussusception, so I opened the abdomen and easily replaced the bowel without doing it any injury. The child afterwards passed two motions—one blood-stained, the other natural—and took his food well, digesting it. Forty-five hours after the operation he began to vomit, the intestines became distended, and he died with all the symptoms of intestinal obstruction. The examination of the body in the post-mortem room showed that the intestines were distended with flatus to within a foot of the ileo-cæcal valve. The distension stopped suddenly, although there was no visible cause for its arrest either outside or within the intestine or abdomen. The colon, like the lower part of the ileum, was collapsed. There was no intussusception and no peritonitis. Similar cases are recorded by Mr. Pick[20] and by Müller.[21] The bowel in these cases is paralysed at the seat of invagination, for it is sufficiently injured to destroy its functional activity, but not badly enough to destroy its vitality. If a similar case should unfortunately happen again in my practice, I shall inject hypodermically a grain or two of barium chloride in solution. The drug is a powerful stimulant of peristalsis, but its action is less severe than eserin. When an intussusception has been successfully reduced by laparotomy, the surgeon should satisfy himself before he closes the abdomen that he has overcome the only cause of obstruction and that the case he is treating is really as simple as it appears to be, for an intussusception may be complicated by a variety of troublesome and dangerous conditions. Dr. Handfield-Jones and Mr. Page[22] published the details of such a complicated case in which there were two intussusceptions of the colon and one of the ordinary ileo-colic

[12] THE LANCET, Jan. 8th, 1887, p. 67.
[13] THE LANCET, July 7th, 1888, p. 17.
[14] Senn: Abdominal Surgery, p. 95.
[15] Dr. Gosselart, Transactions of the Clinical Society, xvi., 1883, p. 62 and plate 3.
[16] THE LANCET, vol. ii., 1892, p. 380.
[17] New York Medical Record, vol. xlix, 1896, p. 85.
[18] Watson Cheyne, THE LANCET, Nov. 29th, 1890, p. 1158; Farrer, THE LANCET, vol. i. 1893, p. 829.
[19] Brit. Med. Jour., vol. ii. 1895, p. 1356.
[20] THE LANCET, June 13th, 1891, p. 1313.
[21] Beiträge zur Klinische Chirurgie zu Tübingen, 1886, ii., 499.
[22] Transactions of the Royal Medical and Chirurgical Society, vol. lxi., p. 301.

type in a boy aged five years, and I have already mentioned the less uncommon cases of double intussusceptions.

*d. Irreducible intussusception.*—Intussusceptions become irreducible under many different conditions. In the first place the intestine may be healthy, but it is kept invaginated by more or less extensive adhesions; by peculiarities of structure, such as twists in its axis or the forcing of one piece of intestine upon another; by great swelling of the intussusception, or by the presence of large tumours in the intussuscepted bowel. Secondly, an intussusception may become irreducible because the bowel is so gangrenous or ulcerated that the surgeon does not dare to exercise traction upon the tumour, nor does he dare to leave the injured intestine within the peritoneal cavity. It has already been pointed out that slight and newly-formed adhesions do not necessarily render an intussusception irreducible, even by such a simple method of treatment as irrigation, though their presence is of unfavourable augury, because increased force is necessary to effect reduction. The adhesions formed in an ordinary case of intussusception which has been allowed to run its course unchecked may be very extensive and very dense. Clinical observations show how widely different is the tendency to the formation of adhesions in different persons. Mr. Marsh[23] performed abdominal section on a child about fifteen hours after the onset of symptoms, only to find that the intussusceptum had become so universally adherent to its sheath that it was impossible to effect a reduction. A similar experience befell Mr. Makins[24] in the case of a child aged four years, who had suffered from symptoms of intussusception for forty-eight hours. On the other hand, the formation of adhesions is sometimes delayed for an indefinite length of time, as in the cases seen by Dr. Lettsom,[25] in which the symptoms of intussusception were of three months' duration, and by Dr. Leichtenstern,[26] where they had lasted eleven months, and yet the post-mortem examination showed that hardly any adhesions were present.

Gangrenous and ulcerating intussusceptions form the second great group of irreducible intussusceptions of the bowel. I have already occupied some part of your time with a consideration of gangrenous intussusception, so that I shall not deal further with its pathology or causation, except to say that it is only produced with the greatest difficulty in experimental invaginations upon animals. The treatment of an irreducible intussusception is fraught with danger, whether it be irreducible from mechanical obstacles on account of extensive adhesions or because of gangrene. The prognosis in these cases was formerly considered desperate, but the advance of abdominal surgery has led to a recognition of the extraordinary readiness with which wounds of the intestine repair when their edges are kept in proper apposition, and we now have good hope that our efforts will be crowned with success even in the most unsatisfactory conditions.

*e. Doubtful cases.*—When the surgeon has opened the abdomen and finds that the intussusception is greatly congested and has lost its gloss he must not too hastily assume that it is dead. A piece of intestine which is only congested will bleed if it be pricked, even though it has lost its lustre, and if it be gently stroked until its vessels are emptied the the blood will be seen to pass along the vessels again as soon as the pressure is taken off them. A piece of intestine in such a condition must be handled very tenderly. It is unnecessary to remove it, and the patient is often so collapsed as to render any prolonged operation impossible, even if enterectomy were advisable. The wisest thing to do in such cases is to wrap a layer or two of gauze round the injured intestine as soon as the invagination has been released. One end of the gauze is left hanging out of the abdominal wound, the intestine is laid inside the peritoneal cavity and the incision is lightly closed with temporary silk sutures. If the bowel ruptures the intestinal contents may then find their way out of the abdominal cavity, whilst if it recovers the gauze can be removed and the wound will close by granulations.

*f. Simple irreducible cases.*—In chronic cases, when the end of the intussusceptum is gangrenous; when the intussusception is short and when it is irreducible from adhesions, from the presence of a polypoid tumour, or from a bulbous enlargement of the end of the intussusceptum, the method recommended by Barker,[27] Jessett,[28] and Greig Smith[29] may give excellent results. The broad principle underlying each modification of the operation is to ensure the union of the intussuscipiens with the intussusceptum by inserting a continuous suture at the neck of the tumour, then to slit open the intussuscipiens, remove so much of the intussusceptum as lies dead or free, stop the bleeding, and sew up the wound in the sheath. It is sometimes impossible to remove the intussusceptum after it has been divided, and in such a case Leszczynski[30] left the piece of bowel in the large intestine to be dealt with by nature, and the patient recovered. These methods are useless when the intussusceptum is attached to the intussuscipiens by firm adhesions for any great distance, as in these cases the two cylinders of intestine may form a continuous tube. Mr. Sydney Jones,[31] recorded such a case occurring in a child, aged nine months, in whom an intussusception proved fatal after the symptoms had lasted nine weeks. The apposed serous surfaces were adherent along their whole length by firm fibrous tissue. An artificial anus would alone be serviceable in the treatment of such a case, or if the adhesions did not extend very low in the rectum Halsted's operation of lateral anastomosis[32] might be employed.

*g. Enterectomy.*—Partial operations are useless when the neck of the sac is ulcerated, when the sheath of the intussusception is gangrenous, or when the invagination is associated with malignant disease of the intestine, and it is exactly in these cases that the greatest and most satisfactory advance has recently been made in the surgical treatment of intussusception. The old operation of making an artificial anus for the relief of the worst cases of irreducible intussusception had long been condemned by the more thoughtful surgeons, and Mr. Howse[33] performed a formal enterectomy for the relief of a ruptured intussusception in a child aged five months in September, 1876. But it was not until 1885 that Professor Braun[34] in Germany and in 1887 that Mr. Lawford Knaggs[35] in England called attention to the feasibility of section and subsequent suture of the intestine in these cases, pointing out the great advantage to be gained by the operation over the older methods. Resection was at first associated with simple end-to-end suture of the divided intestine, which is theoretically the most perfect but practically the most difficult method of obtaining union. The results of simple end-to-end suture proved most unsatisfactory, and this method has now been abandoned for more complex operations, which have resolved themselves into the union with, and union without, the aid of mechanical appliances, the methods of Senn and of Maunsell respectively. Personally, I have no hesitation whatever in giving in my adherence to the non-mechanical party, for it seems to me that its methods are more simple, whilst its results are at least as good as those obtained by the mechanical school. Maunsell's method is particularly suited for the ileo-cæcal form of intussusception which is the more common, for the two pieces of intestine vary greatly in their calibre, so that the invagination is easy. For the present, however, Murphy's button seems to have the advantage, though I think that it is but a temporary one, for in all the cases where it has been used successfully the intussusception has been of the enteric form, where the serous surfaces are smooth and can be brought into sufficiently close approximation to ensure union by first intention. It must necessarily prove less useful in intussusceptions involving the large intestine because the appendices epiploicæ render it impossible to bring the two surfaces into regular and uniform apposition.

My own experiments carried on without a knowledge of the very valuable and more extensive work done along the same lines by Mr. Ballance and Mr. Edmunds,[36] have satisfied me that in animals Maunsell's method yields the most satisfactory results. It can be performed at a moment's notice and the entire operation, from the

[23] THE LANCET, Feb. 14th, 1891, p. 367.
[24] Transactions of the Clinical Society, vol. xxii., p. 282.
[25] Philosophical Transactions, vol. lxxvi., p. 305.
[26] Deutsches Archiv für Klinische Medicin, xii., 1874, p. 381.
[27] THE LANCET, Jan. 9th, 1892, p. 79.
[28] Surgical Disease of the Stomach. 1872, p. 133.
[29] Abdominal Surgery, fifth edition, 1896, vol. ii., p. 675.
[30] Pamietnik ii Zjardu chirurgor. polskich, 1890, quoted by Rydygier in the Verhandlungen der Deutschen Gesellschaft für Chirurge, 24, 1895, p. 439.
[31] Transactions of the Pathological Society, vol. viii., p. 179.
[32] American Journal of the Medical Sciences, vol. xliv., 1887, p. 437 and Bulletins of the Johns Hopkins Hospital, vol. ii., 1891, p. 1.
[33] Transactions of the Medico-Chirurgical Society, vol. lix., p. 94.
[34] Verhandlungen der Deutschen Gesellschaft für Chirurgie, xiv., 1885.
[35] THE LANCET, April 16th, June 4th and 11th, 1887.
[36] Transactions of the Royal Medical and Chirurgical Society, vol. lxxix., 1896, p. 255.

first incision to the last suture in the abdominal wall, can be completed easily in thirty minutes. The outlook for cases of irreducible intussusception treated by enterectomy is distinctly favourable, whatever method be adopted. When Braun[37] published his statistics in 1885 he could only find a single case where recovery had followed enterectomy for the relief of intussusception. Rydygier, in his addendum to Braun's list, published ten years later, has been able to collect the records[38] of 25 cases published between the years 1885 and 1895 in which recovery has taken place after the intestine has been resected or an anastomosis has been made between two pieces of bowel for the cure of intussusception. I find that four more recoveries are to be added to this list. Two of these occurred in America,[39] where the operation was done for the relief of chronic intussusception in women and two were done in England for acute gangrenous intussusception in children. One of these cases is recorded by Mr. Mitchell Banks,[40] who tells me that the boy is still alive and well. The other case came under the care of my colleague, Mr. Pickering Pick, and, though it is still unpublished,[41] he has very kindly given me leave to say that it was that of a girl aged eight and three-quarter years, who had complained of pain after she had jumped off a form at school. The abdomen was opened on the seventh day after the onset of symptoms and a stinking intussusception was found two inches above the ileo-cæcal valve. It was cut away, and the two ends of the ileum were brought together with a Murphy's button, which was passed on the ninth day after the operation.

For the sake of completeness I will sum up the conclusions at which I have arrived in this lecture. Intussusception is a condition which brooks no delay in its treatment, for something must always be done at once except, perhaps, in those slight cases which are indistinguishable from severe colic. In all doubtful cases purgatives should be completely withheld. I found in my experiments that cats and rabbits bore a simple invagination with remarkable freedom from symptoms, and that after a varying period of time the invaginated bowel could be excised and the animal would recover. All the animals, however, to whom purgatives were administered after the intestines had been invaginated died when enterectomy was performed. Clinical evidence teaches the same lesson, for all the records of cases show that the symptoms have been seriously increased when the patient has been purged. The routine treatment of intussusception is to chloroform the patient and steadily to fill his large intestine with hot salt solution under a hydrostatic pressure of not more than 3 ft. in a child, the fluid being allowed to remain in the intestine at least ten minutes. The earlier this method is adopted after the appearance of the symptoms the better are the results obtained, but it should not be adopted in enteric intussusception, in cases where the symptoms are very acute, or in those where the absence of signs or symptoms, with a subnormal temperature, leads the surgeon to suspect that the intestine is becoming gangrenous. In these cases, and when the intussusception is not reduced after irrigation has twice been tried, and when after reduction the intussusception has twice recurred, the abdomen must be opened. The surgeon must then be prepared to deal effectually with the conditions he may find by such operative means as he can carry out with the least amount of shock and in the shortest space of time that is compatible with the safety of the patient. This will be ensured if he uses the method with which he is most familiar. But he should bear in mind that hardly a case can arise in which he is justified in closing the abdominal wound without at least an attempt to complete the operation by reducing or removing the intussusception. Such half measures as the formation of an artificial anus are hardly ever justifiable, and the results obtained by them are usually most disastrous.

[37] Verhandlungen der Deutschen Gesellschaft für Chirurgie, xiv., Berlin, 1885, p. 491.
[38] Ibid., xxiv., Berlin, 1895, pp. 448-459.
[39] Annals of Surgery, vol. xxiii., p. 440; and vol. xxiv., p. 733.
[40] THE LANCET, Feb. 23rd, 1895, p. 487; and Brit. Med. Jour., vol. ii., 1896, p. 1197.
[41] Published since the above was written in the Quarterly Medical Journal, vol. v., 1897, p. 121.

GUILDHALL BANQUET TO POOR CHILDREN.—After paying all expenses, including the cost of 1000 hampers sent to poor crippled children, Mr. Alderman Treloar has given £34 6s. 1d., the surplus of his fund, to Mr. J. Kirk, the secretary of the Ragged School Union.

# SOME SMALL-POX STATISTICS.

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[WITH A COLOURED CHART.]

THE following figures[1] are derived from personal inquiry into the incidence of small-pox on households in three recent outbreaks—namely, (1) in the Dewsbury Union, 1891-92; (2) at Leicester, 1893-94; and (3) at Gloucester, 1895-96. They comprise information of:—Dewsbury: 544 households, numbering 3000 persons. Leicester: 193 households, numbering 1234 persons. Gloucester: 899 households, numbering 4861 persons. The small-pox attack-rates were:—Dewsbury: 3000 exposed, 887 attacked; rate 29·5 per cent. Leicester: 1234 exposed, 320 attacked; rate 25·9 per cent. Gloucester: 4861 exposed, 1717 attacked; rate 35·8 per cent. The small-pox mortality was:—Dewsbury (3000 persons): 83 deaths; mortality, 2·7 per cent. Leicester (1234 persons): 17 deaths; mortality, 1·3 per cent. Gloucester (4861 persons): 370 deaths; mortality, 7·6 per cent. The small-pox case-fatality was:—Dewsbury: 887 attacked; 83 deaths; fatality, 9·3 per cent. Leicester: 320 attacked; 17 deaths; fatality, 5·3 per cent. Gloucester: 1717 attacked; 370 deaths; fatality, 21·6 per cent.

At different age-periods these returns show (Table I.):—

TABLE I

| — | Exposed. | Attacked. | Died. | Attack-rate. | Mortality. | Case-fatality. |
|---|---|---|---|---|---|---|
| *Under 1 year.* | | | | Per cent. | Per cent. | Per cent. |
| Dewsbury ... ... | 75 | 25 | 16 | 33·3 | 21·3 | 64·0 |
| Leicester... ... ... | 35 | 7 | 2 | 21·2 | 6·0 | 28·5 |
| Gloucester ... ... | 167 | 80 | 56 | 47·9 | 33·5 | 70·0 |
| *1 to 10 years.* | | | | | | |
| Dewsbury ... ... | 654 | 178 | 32 | 27·2 | 4·8 | 18·0 |
| Leicester... ... ... | 328 | 95 | 10 | 28·9 | 3·0 | 10·5 |
| Gloucester ... ... | 1436 | 561 | 193 | 39·0 | 13·4 | 34·4 |
| *10 to 30 years.* | | | | | | |
| Dewsbury ... ... | 1349 | 482 | 24 | 35·2 | 1·7 | 5·0 |
| Leicester... ... ... | 534 | 151 | 3 | 22·6 | 0·5 | 2·0 |
| Gloucester ... ... | 1751 | 594 | 48 | 33·9 | 2·7 | 8·0 |
| *30 years and over.* | | | | | | |
| Dewsbury ... ... | 901 | 202 | 11 | 22·4 | 1·2 | 5·4 |
| Leicester... ... ... | 330 | 67 | 2 | 20·3 | 0·6 | 3·0 |
| Gloucester ... ... | 1507 | 482 | 73 | 31·9 | 4·8 | 15·1 |

*Note.*—In Dewsbury the age was not ascertained in 21 of the exposed, none of whom were attacked. In Leicester the age was not ascertained in 9 of the exposed, none of whom were attacked.

*Proportion of vaccinated and unvaccinated.*—For the sake of simplicity the whole series has been divided into two categories only, the "vaccinated" and the "unvaccinated"; but in detailed analysis it is necessary for greater accuracy to further sub-divide these categories. Thus the "vaccinated" group here includes those instances (few comparatively) where no certain evidence could be obtained as to the fact of vaccination and those in which vaccination had been alleged, but of which no ocular evidence could be obtained; again, amongst the "unvaccinated" are here included all those who at the time of the invasion of the house by small-pox underwent primary vaccination—a not inconsiderable number in Dewsbury and Gloucester. If these were separated the effect on the statistics would be a lowering of the proportion of the unvaccinated, with a raising of the attack- and mortality-rates among the latter. For the attack-rate and mortality of those who were "undergoing" vaccination were, the former especially, much below the figure obtained by their inclusion with the strictly unvaccinated. (See reports on these outbreaks in the appendices to the final report of the Royal Commission). The term "vaccinated" refers to primary vaccination only.

At Dewsbury, of 3000 exposed, 2395 were vaccinated, a

[1] Most of these data have been published in the Final Report of the Royal Commission on Vaccination.

proportion of 79·8 per cent. At Leicester, of 1234 exposed, 846 were vaccinated, a proportion of 68·5 per cent. At Gloucester, of 4861 exposed, 3386 were vaccinated, a proportion of 69·6 per cent. These proportions are somewhat altered when those who were attacked are alone considered, for amongst these there were at Dewsbury, 887 attacked, of whom 574 were vaccinated, or 64·7 per cent.; at Leicester, 320 were attacked, of whom 170 were vaccinated, or 53·1 per cent.; and at Gloucester, 1717 were attacked, the vaccinated numbering 1028, or nearly 60 per cent. Or, dealing with the *fatal* cases only, the proportions were: at Dewsbury, 83 deaths, vaccinated 13, or 16·6 per cent.; at Leicester, 17 deaths, vaccinated 1, or 5·9 per cent.; and at Gloucester, 370 deaths, vaccinated 95, or 25·7 per cent.

Distributed amongst age-periods the figures are (Tables II. and III.):—

TABLE II.

| — | Exposed. | | Attacked. | | Died. | |
|---|---|---|---|---|---|---|
| | Vaccinated. | Unvaccinated. | Vaccinated. | Unvaccinated. | Vaccinated. | Unvaccinated. |
| *Under 1 year.* | | | | | | |
| Dewsbury ... ... | 16 | 59 | 1 | 24 | 0 | 16 |
| Leicester... ... ... | 1 | 32 | 0 | 7 | 0 | 2 |
| Gloucester ... ... | 14 | 153 | 0 | 80 | 0 | 56 |
| *1 to 10 years* | | | | | | |
| Dewsbury ... ... | 400 | 254 | 43 | 133 | 1 | 31 |
| Leicester... ... ... | 77 | 251 | 2 | 93 | 0 | 10 |
| Gloucester ... ... | 258 | 1178 | 24 | 537 | 1 | 192 |
| *10 to 30 years.* | | | | | | |
| Dewsbury ... ... | 1125 | 224 | 341 | 141 | 5 | 19 |
| Leicester... ... ... | 438 | 96 | 104 | 47 | 0 | 3 |
| Gloucester ... ... | 1649 | 102 | 539 | 55 | 30 | 18 |
| *30 years and over.* | | | | | | |
| Dewsbury ... ... | 333 | 68 | 187 | 15 | 7 | 4 |
| Leicester... ... ... | 321 | 9 | 64 | 3 | 1 | 1 |
| Gloucester ... ... | 1465 | 42 | 465 | 17 | 64 | 9 |
| *Age uncertain.* | | | | | | |
| Dewsbury ... ... | 21 | — | — | — | — | — |
| Leicester... ... ... | 9 | — | — | — | — | — |
| Gloucester ... ... | — | — | — | — | — | — |

TABLE III.—*Showing Proportionate Distribution.*

| — | Exposed. | | Attacked. | | Died. | |
|---|---|---|---|---|---|---|
| | Vaccinated. | Unvaccinated. | Vaccinated. | Unvaccinated. | Vaccinated. | Unvaccinated. |
| *Under 1 year.* | Percent | Percent | Percent | Percent | Percent | Percent |
| Dewsbury ... ... | 21·3 | 78·7 | 4·0 | 96·0 | — | 100 |
| Leicester... ... ... | 3·0 | 97·0 | — | 100·0 | — | 100 |
| Gloucester ... ... | 8·3 | 91·7 | — | 100·0 | — | 100 |
| *1 to 10 years.* | | | | | | |
| Dewsbury ... ... | 61·1 | 38·9 | 24·4 | 75·6 | 3·1 | 96·9 |
| Leicester... ... ... | 23·4 | 76·6 | 2·1 | 97·9 | — | 100·0 |
| Gloucester ... ... | 17·9 | 82·1 | 4·2 | 95·8 | 0·5 | 99·5 |
| *10 to 30 years.* | | | | | | |
| Dewsbury ... ... | 83·4 | 16·6 | 70·7 | 29·3 | 20·8 | 79·2 |
| Leicester... ... ... | 82·0 | 18·0 | 68·8 | 31·2 | — | 100·0 |
| Gloucester ... ... | 94·1 | 5·9 | 90·7 | 9·3 | 62·5 | 37·5 |
| *30 years and over.* | | | | | | |
| Dewsbury ... ... | 91·3 | 8·7 | 92·5 | 7·5 | 63·6 | 36·4 |
| Leicester... ... ... | 97·2 | 2·8 | 95·5 | 4·5 | 50·0 | 50·0 |
| Gloucester ... ... | 97·2 | 2·8 | 96·4 | 3·6 | 87·6 | 12·4 |

*Attack-rates and mortality.*—The foregoing figures supply the means of contrasting the vaccinated and unvaccinated series in respect to their rates of attack—i.e., the proportion of those exposed to infection who contracted small-pox. They also supply data for determining the mortality (as well as the case-fatality) in each series. At Dewsbury, where the attack-rate on the whole number exposed was 29·5 per cent., the rate for the vaccinated was 24 per cent., and for the unvaccinated 51·7 per cent. At Leicester, where the attack-rate on the whole number exposed was 25·9 per cent., it was for the vaccinated 20·1 per cent., and for the unvaccinated 38·4 per cent. At Gloucester, where the attack-rate for the whole number exposed was 35·8 per cent., it was for the vaccinated 30·3 per cent., and for the unvaccinated 46·7 per cent.

Then as regards the rate of mortality, at Dewsbury for all classes, this was 2·7 per cent., for the vaccinated 0·5 per cent. and for the unvaccinated 11·5 per cent. At Leicester, where the mortality-rate for the whole was 1·3 per cent., for the vaccinated it was 0·1 per cent., and for the unvaccinated 4·1 per cent. At Gloucester, where the mortality-rate for the whole was 7·6 per cent., it was for the vaccinated 2·8 per cent., and for the unvaccinated 18·6 per cent. The case-fatality dealing with larger percentages exhibits this contrast more strikingly. Thus at Dewsbury the general fatality was 9·3 per cent., for the vaccinated 2·2 per cent., and for the unvaccinated 22·3 per cent. At Leicester, where the general fatality was 5·3 per cent., it was for the vaccinated 0·6 per cent., and for the unvaccinated 10·7 per cent. At Gloucester, where the general fatality was 21·5 per cent., it was for the vaccinated 9·2 per cent., and for the unvaccinated 40·0 per cent.

These returns may again be distributed amongst age-periods as follows (Table IV.):—

TABLE IV.

| — | Attack-rate. | | Mortality-rate. | | Case fatality-rate. | |
|---|---|---|---|---|---|---|
| | Vaccinated. | Unvaccinated. | Vaccinated. | Unvaccinated. | Vaccinated. | Unvaccinated. |
| *Under 1 year.* | Percent | Percent | Percent | Percent | Percent | Percent |
| Dewsbury ... ... | 6·2 | 40·7 | — | 27·1 | — | 66·6 |
| Leicester ... ... | — | 21·8 | — | 6·2 | — | 28·5 |
| Gloucester ... ... | — | 52·2 | — | 36·6 | — | 70·0 |
| *1 to 10 years.* | | | | | | |
| Dewsbury ... ... | 11·2 | 52·3 | 0·2 | 12·2 | 2·3 | 23·3 |
| Leicester ... ... | 2·6 | 37·0 | — | 4·0 | — | 10·7 |
| Gloucester ... ... | 9·3 | 45·5 | 0·4 | 16·3 | 4·1 | 35·7 |
| *10 to 30 years.* | | | | | | |
| Dewsbury ... ... | 30·3 | 62·9 | 0·4 | 8·4 | 1·4 | 13·4 |
| Leicester... ... ... | 23·7 | 48·9 | — | 3·1 | — | 6·8 |
| Gloucester ... ... | 32·6 | 53·9 | 1·8 | 17·6 | 8·0 | 32·7 |
| *30 years and over.* | | | | | | |
| Dewsbury ... ... | 22·4 | 22·0 | 0·8 | 5·8 | 3·7 | 26·6 |
| Leicester... ... ... | 20·0 | 33·3 | 0·3 | 11·1 | 1·5 | 33·3 |
| Gloucester ... ... | 30·3 | 40·5 | 4·3 | 21·4 | 13·7 | 53·0 |

*The Class of "Under" Vaccination.*—It has already been stated that the inclusion with the "unvaccinated" of those who were primarily vaccinated at the time of infection of the household materially influences the attack-rates and mortality amongst the former. This is most apparent in places where, as at Gloucester, such vaccination during an epidemic is widely resorted to. In order to give an opportunity to anyone to revise the foregoing returns by the subtraction of those who were "under" vaccination, as well as to give some idea of the influence which this recent vaccination appears to exert, these cases are now dealt with apart. They require, however, much closer scrutiny than can be here given, especially as to the time of the vaccination and its objective result. This has been done elsewhere, and I here must content myself with the remark that however closely they are analysed the only result of any change in the figures would be the re-transference of some to the list of the "unvaccinated," which could not fail, I think, to still further

diminish the mortality of those admitted unquestionably to be "under" vaccination. At Dewsbury, out of the 605 in the "unvaccinated class," there were 78 who may be considered as "under" vaccination when exposed to infection; of these, 21 were attacked and 3 died.[2] The attack-rate was, therefore, 28·9 per cent., the mortality 3·8 per cent., and the case-fatality 14·2 per cent. At Leicester there were exposed 17, attacked 4, and no deaths. The attack-rate was, therefore, 23·5 per cent. At Gloucester there were exposed 653, attacked 85, deaths 25, or an attack-rate of 13·1 per cent., mortality 3·8 per cent., and case-fatality 29·4 per cent.

Distributed in age-periods these figures are (Table V.):—

TABLE V.

| — | Exposed. | Attacked. | Died. | Attack rate. | Mortality. | Case fatality. |
|---|---|---|---|---|---|---|
| *Under 1 year.* | | | | Per cent. | Per cent. | Per cent. |
| Dewsbury | 16 | 7 | 3 | 43·7 | 18·7 | 43·0 |
| Leicester | 2 | 1 | — | 50·0 | — | — |
| Gloucester | 57 | 10 | 3 | 17·5 | 5·2 | 30·0 |
| *1 to 10 years.* | | | | | | |
| Dewsbury | 41 | 10 | — | 24·4 | — | — |
| Leicester | 8 | 2 | — | 25·0 | — | — |
| Gloucester | 550 | 66 | 21 | 12·0 | 3·8 | 31·8 |
| *10 to 30 years.* | | | | | | |
| Dewsbury | 19 | 4 | — | 21·0 | — | — |
| Leicester | 7 | 1 | — | 14·3 | — | — |
| Gloucester | 39 | 8 | 1 | 20·5 | 2·5 | 12·5 |
| *30 years and over.* | | | | | | |
| Dewsbury | 2 | — | — | — | — | — |
| Leicester | — | — | — | — | — | — |
| Gloucester | 7 | 1 | — | 14·3 | — | — |

Thus it will be seen that with the exception of the Dewsbury return at age "under one year" the attack rates are markedly lower than those given for the whole "unvaccinated class" at the different ages. This is strikingly the case with the Gloucester figures, where, too, the total number is very high. Similarly the mortality and fatality rates are in every instance lower than those pertaining to the whole "unvaccinated class," although mostly much higher than the rates for the "vaccinated."

*Previous small-pox.*—Of the 9095 persons exposed to infection in the series here dealt with, 222 were stated to have been attacked by small-pox in early life, a proportion of 2·4 per cent. Of these, 10 were again attacked, forming out of the total attacks 2922, a proportion of 3·4 per cent.; none died. The attack-rate amongst those who had small-pox a second time was, therefore, 4·5 per cent., or about one-seventh of the general attack-rate.

As regards age-distribution, a previous attack of small-pox was reported in only 2 out of the 2693 who were under 10 years of age when exposed to infection a second time, and neither of these again contracted the disease. Of the 3634 exposed to infection between the ages of ten to thirty years, 33 were stated to have had small-pox previously, and 3 of these again were infected. Of those aged thirty years and over, 187 out of the 2738 exposed to infection had previously suffered from small-pox, of whom 7 were again attacked. Thus the attack-rate for these persons who were again exposed to infection was—from ten to thirty years, 9·1 per cent.; thirty years and over, 3·7 per cent. Distributing these 222 persons between the two series of "vaccinated" and "unvaccinated" there were 146 in the former and 76 in the latter. So that the attack-rate, or liability to a second attack, was for the vaccinated 4·1 per cent., and for the unvaccinated 5·2 per cent. Of the vaccinated 17 were between ten and thirty years, of whom 2 were again attacked, or 11·3 per cent., and 129 over thirty years, of whom 1 was attacked, or 0·8 per cent. (nearly). Of the unvaccinated 2 were under ten years of age (none attacked); 16 were between ten and thirty years, of whom 1 was attacked a second time, or 6·2 per cent.; and 58 were over thirty years, of whom 3 were again attacked, or 5·2 per cent. (nearly). The subtraction of these persons, who enjoyed a much greater immunity from attack than those who had never been infected before, is essential to the endeavour to arrive at a just conclusion upon the question of the protective power of vaccination. Were this done we should have amongst the whole of those exposed 9095 minus 222, or 8873, and attacked 2922 minus 10, or 2912, giving an attack-rate of 32·8 instead of 32·1.

Similarly, the vaccinated figure would be 6627 minus 146, or 6481, of whom were attacked 1770 minus 6, or 1764, an attack-rate of 27·0 per cent., instead of 26·7. And the unvaccinated figure would be reduced 2468 minus 76, or 2392, of whom were attacked 1152 minus 4, or 1148, or an attack-rate of 48 per cent., instead of 46·6. The change wrought by this subtraction is, however, better seen in the later periods of life, where most of these figures occur. Thus, to take the age-period thirty and over only, the figures would be thus altered:—

| | Exposed. | Attacked. | Attack-rate. |
|---|---|---|---|
| Vaccinated | 2619 − 129 = 2490 | 716 − 4 = 712 | 28·6 |
| Unvaccinated | 119 − 58 = 61 | 35 − 3 = 32 | 52·4 |

Whereas the rates at this age-period, when these persons are included, are vaccinated, 27·3 per cent.; and unvaccinated 29·4 per cent. The change is, therefore, most marked with respect to the "unvaccinated," who have been protected by having experienced an attack of small-pox in early life.

The annexed table (Table VI.) will enable those interested in this subject to make similar calculations for each of the several districts. It will be found that the attack-rate amongst the unvaccinated is everywhere much raised by the deduction.

TABLE VI.—*Showing Numbers previously Attacked by Small-pox.*

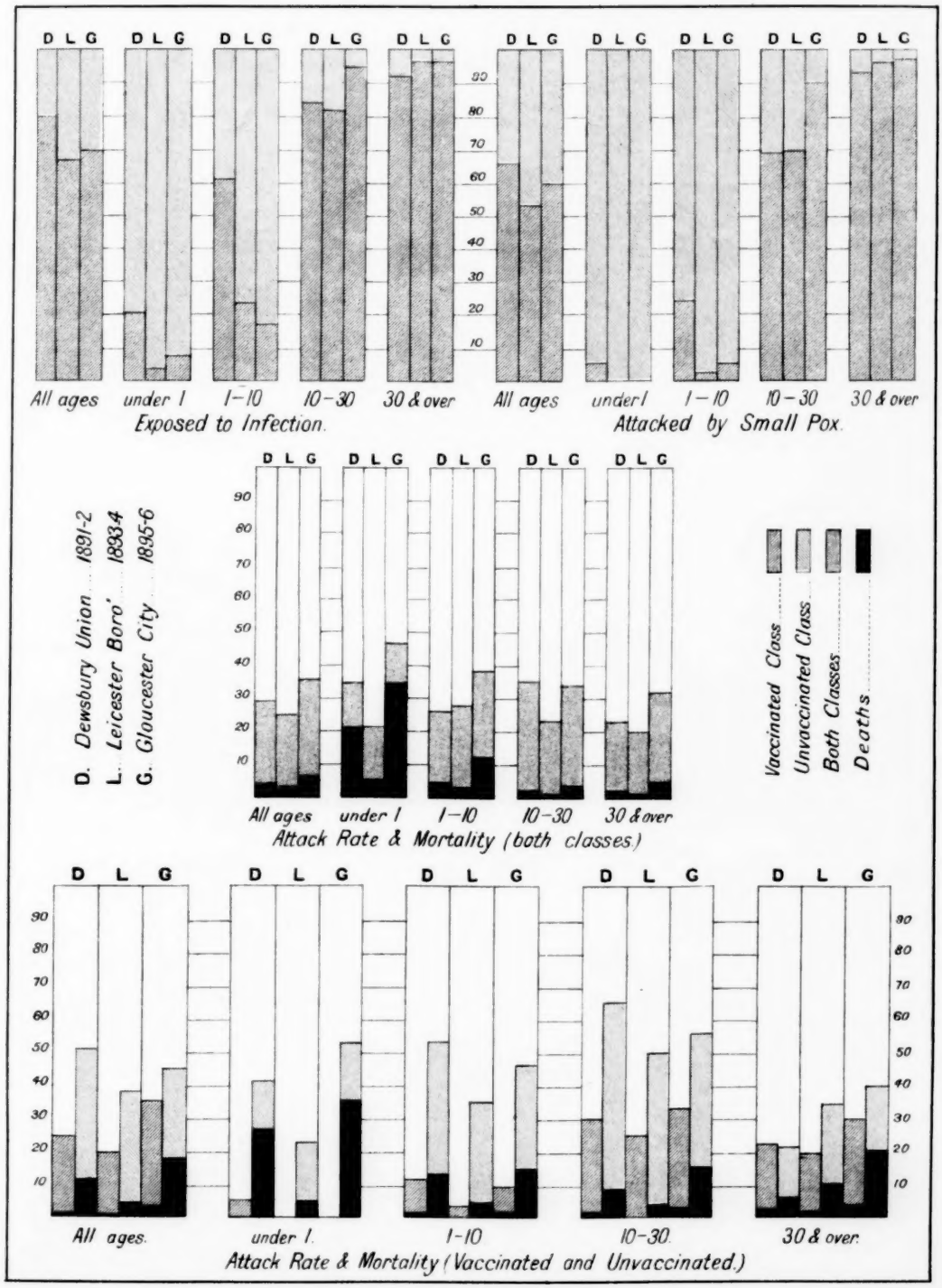
| — | Dewsbury. | Leicester. | Gloucester. | Total. |
|---|---|---|---|---|
| Exposed | 126 | 19 | 77 | 222 |
| Attacked | 6 | — | 4 | 10 |
| *Vaccinated.* | | | | |
| Exposed | 76 | 14 | 56 | 146 |
| Attacked | 3 | — | 3 | 6 |
| *Unvaccinated.* | | | | |
| Exposed | 50 | 5 | 21 | 76 |
| Attacked | 3 | — | 1 | 4 |
| EXPOSED TO INFECTION. *Vaccinated.* | | | | |
| 10 to 30 years | 11 | — | 6 | 17 |
| 30 years and over | 65 | 14 | 50 | 129 |
| *Unvaccinated.* | | | | |
| 1 to 10 years | — | — | 2 | 2 |
| 10 to 30 ,, | 13 | — | 3 | 16 |
| 30 years and over | 37 | 5 | 16 | 58 |
| ATTACKED BY SMALL-POX. *Vaccinated.* | | | | |
| 10 to 30 years | 2 | — | — | 2 |
| 30 years and over | 1 | — | 3 | 4 |
| *Unvaccinated.* | | | | |
| 10 to 30 years | 1 | — | — | 1 |
| 30 years and over | 2 | — | 1 | 3 |

## CONCLUSIONS.

Amongst the conclusions which may legitimately be drawn from the foregoing statistics are the following:—

1. That when an outbreak of small-pox occurs within a community of which the child-population is largely unvaccinated the attack-rate and mortality are highest in the early

[2] In my Report on the Dewsbury Outbreak (Appendix to the Final Report of the Royal Commission), on p. 128 et seq. these cases have been throughout separated from the unvaccinated series.




*TO ILLUSTRATE AN ARTICLE ON SOME SMALL-POX STATISTICS,*

*BY Dr. SIDNEY COUPLAND.*

years of life (under ten years). Combining the results of the three inquiries there were in all 9095 exposed to infection, of whom 2922 were attacked and 470 died—an attack-rate of 32·1, a mortality-rate of 2·1, and a (case) fatality-rate of 16·0 per cent. At ages under one year of 275 exposed 112 were attacked and 74 died—an attack-rate of 40·7, a mortality-rate of 26·9, and a fatality-rate of 66·0. At ages one to ten years of 2418 exposed, 852 were attacked and 235 died—an attack-rate of 35·2, a mortality-rate of 9·7, and a fatality-rate of 27·5.

2. That the attack- and death-rates at the age-period ten to thirty years most nearly approximate to the mean, but that the fatality-rate is lower. Of 3634 exposed, 1227 were attacked and 75 died—an attack-rate of 33·7, a mortality-rate of 2·0, and a fatality-rate of 6·1.

3 That the attack-rate at ages thirty years and over is lowest of all, but the fatality is higher than at the previous period. Of 2738 exposed, 751 were attacked and 86 died—an attack-rate of 27·4, a mortality-rate of 3·1, and a fatality-rate of 11·4.

4. That vaccination has a marked influence in diminishing liability to attack and to a fatal issue, an influence most apparent in early life, but obtaining in lessening degree at later periods, the rates amongst the vaccinated being always below those of all classes at the same period:—

TABLE VII.—*Rates among the Vaccinated.*

| Vaccinated. | Attack-rate. | Mortality. | Fatality. |
|---|---|---|---|
| Under 1 year ... ... ... | 3·2 | — | — |
| 1 to 10 years ... ... ... | 9·3 | 0·2 | 2·9 |
| 10 to 30 years ... ... ... | 30·6 | 1·1 | 3·5 |
| 30 years and over ... ... | 27·3 | 2·7 | 10·0 |

5. That on the other hand, the lack of vaccination enhances the liability to attack and increases the mortality from small-pox in an infected community, both absolutely and relatively, but that the absence of this influence is less marked, at any rate, so far as regards the liability to infection, as age advances.

TABLE VIII.—*Rates among the Unvaccinated.*

| Unvaccinated. | Attack-rate. | Mortality. | Fatality. |
|---|---|---|---|
| Under 1 year ... ... ... | 45·5 | 30·3 | 66·6 |
| 1 to 10 years ... ... ... | 48·5 | 13·8 | 29·9 |
| 10 to 30 years ... ... ... | 57·5 | 9·4 | 16·4 |
| 30 years and over ... ... | 29·4 | 11·8 | 40·0 |

6. That although great variations may exist between different outbreaks as regards the general attack-rate and mortality, irrespective of the proportion of the vaccinated and unvaccinated in the community, yet in every instance a similar disproportion exists in the attack-rate and mortality of the vaccinated and unvaccinated respectively. The comparison of the outbreaks at Leicester and Gloucester bears this out. In these two places the proportion of the vaccinated in the community invaded by small-pox was nearly the same, and a like parallelism obtained at each age-period. These proportions were also maintained amongst those attacked with small-pox, except that in every instance the relative proportion was higher of the unvaccinated amongst those attacked than it was amongst those exposed. The general attack-rates and the mortality at all and any age were notably higher at Gloucester than at Leicester. Nevertheless in the two places the attack-rates of vaccinated and of unvaccinated were similarly disproportionate throughout.

7. That upon this it appears that (*a*) whether a small-pox outbreak be severe or slight, intense in its virulence and fatal in its effects, or comparatively mild and yielding a low death-rate, (*b*) whatever may be the local conditions or circumstances, the amount of isolation and other less obvious factors whereby the extent of an outbreak is influenced,—there still remains one feature common to all. This is that invariably the unvaccinated members are more liable to be attacked, besides yielding a rate of fatality considerably in excess of that which results amongst the vaccinated section.

8. That the disparity between the vaccinated and unvaccinated rates is considerably increased if those who were "undergoing vaccination" when exposed or attacked be deducted from the total of the "unvaccinated," and even more markedly (for the later periods of life especially) by a similar deduction of those who had in previous years suffered from small-pox.

EXPLANATION OF THE COLOURED CHART.

These diagrams have been constructed from the statistical data given above. They are intended to furnish a ready means of comparison between the three outbreaks in respect to: (1) the general attack-rate and mortality at all ages and in each of four age-periods; (2) the proportionate numbers (per cent.) of the vaccinated and unvaccinated at all ages and at each age-period amongst those exposed to infection; (3) the proportionate numbers (per cent.) of the vaccinated and unvaccinated at all ages and at each age-period of those attacked by small-pox; and (4) the attack-rate and mortality (per cent.) of the "vaccinated" and "unvaccinated" groups at all ages and at each age-period.

*(To be continued.)*

# TWO CASES OF INTRACRANIAL TUMOUR.

BY F. W. EURICH, M.B., C.M. EDIN.,
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INTRACRANIAL tumours form but a small percentage of the cases occurring in asylum practice. Their comparative rarity has frequently been commented upon, the more so as such an institution is the haven in which only sufferers from intracranial diseases or their results find refuge. The effects and manifestations of tumour-growth have usually been divided into those of a local and of a general nature. The former are very rarely such as to render the patient's removal to an asylum advisable, while the mental disturbances included among the latter are usually of a simple nature, such as dementia of varying degree, with or without stupor, or slight melancholia readily controllable at home or in hospital. Occasionally, however, a different tale can be told; and it is my present purpose to illustrate some of these more unusual features with the help of a couple of cases which have, among others, come under my notice as pathologist during the past year.

CASE 1. *Epilepsy (?); tumour of the frontal lobe.*—The first case, for the clinical notes of which I am indebted to my colleague, Mr. C. Bayley, is that of a man aged fifty-five years, admitted into Whittingham Asylum on March 28th, 1895, and who died therein on Sept. 19th of the same year. The certificate on which he was admitted states that "he has delusions of identity, time, and place; that he cannot give any connected account of himself, wanders about on imaginary journeyings, and has no idea where he is or when he came here." Historical particulars are very scanty. He is said to have suffered from two previous attacks, but the age at which they occurred, their duration, and other details are returned as unknown. Notes as to family tendencies and previous bodily health were not forthcoming, while the man's mental condition precluded the possibility of his giving a reliable account of himself. He volunteered the statement that he suffered from fits, and the facts mentioned in the certificate could certainly be interpreted to that effect, but he could not tell how long he had been so afflicted, when they seized him, or whether he had an "aura" or not. He was distinctly demented, his apperception being slow and his memory, for recent events in particular, impaired, but there was no sign of stupor. He presented delusions of identity, time, and place, as mentioned above, and was obstinate, bad-tempered, and passionate, displaying the common "epileptic character." He would at times make rushes, attempting to strike those about him or to smash surrounding objects. He was careless as to his person and took no active interest in what was going on around him. When I saw him he was reading with some intelligence a weekly periodical of light literature; in conversation his sentences were well-formed and his utterance distinct, but he was sullen and showed a disinclination to talk. Particularly was there no sign of aphasia in any of its forms. Physically he was well-nourished, somewhat sallow complexioned, with dilated capillaries on the cheeks and nose, and glistening sclerotics. The pupils were contracted, reacting well to light and

accommodation. There was no optic neuritis. The reflexes were all normal; there was no motor or sensory impairment. The pulse was 70 and the respiration 19. He ate and slept well and seemed in fair general health, with the exception of a troublesome cough. His condition remained the same till the beginning of August, when the cough grew worse, a slight rise in the temperature was registered in the evenings, and he took to his bed. Physical examination only revealed the signs of chronic bronchitis. At the end of August he had an attack of hæmoptysis; he became feeble and emaciated, and his respirations became shallow and very rapid (60 per minute). Cheyne-Stokes respiration was noted towards the close and he died on Sept. 19th, 1895. At the necropsy there were found, besides chronic bronchitis, scattered patches of broncho-pneumonia, and an abscess cavity (non-tuberculous) in the left upper lobe, the following conditions:—The calvarium presented nothing of note; the dura mater was somewhat thickened and tense; on opening it the subdural space was dry and the subjacent convolutions slightly flattened. On attempting to remove the brain it was found to be attached to the floor of the anterior fossa by a tumour. Involving the dura mater and the pia mater, over the anterior and inferior aspects of the left frontal lobe, but leaving the bone untouched, the tumour had invaded the left frontal lobe penetrating as far as the head of the caudate nucleus. The falx was adherent to the mesial aspect of both frontal lobes and was likewise involved by the tumour which, passing through it, had attacked the adjacent cortex of the right lobe. The corpus callosum had also become infiltrated for about an inch. The tumour was not encapsulated and could not be shelled out; it was reddish-white, with a peculiar soft, granular aspect on section and of fairly firm consistence. The white matter of the hemispheres in its immediate neighbourhood had softened, which softening extended to the anterior edge of both optic thalami, the ependyma, which was granular, alone separating it from the cavity of the lateral ventricles. The basal arteries were slightly atheromatous; with this exception the rest of the brain presented nothing of any interest. There were no secondary deposits in any part of the body.

CASE 2. *General paralysis simulated; apparent convalescence; relapse; multiple psammomata of the dura mater.*—The second case (clinical notes of which have been kindly supplied by my colleagues, Dr. A. Simpson and Mr. R. J. Stephens) is of peculiar interest and in some respects perhaps unique. It is that of a woman, aged thirty-eight years, who was admitted into the asylum on Nov. 23rd, 1894, and died on July 10th, 1895. The reception order states that "she is sullen, morose, and stupid; she curls herself up under the bed-clothes and refuses to answer questions and to take food. She is excited at times and with difficulty restrained. Her husband is afraid that she will do away with herself." The somewhat meagre history said that she was married and had three children, the youngest one year old. Her parents died from phthisis and one brother committed suicide. She had been of temperate habits and, with the exception of an attack of typhoid fever some years ago, had always enjoyed good health. The present attack was stated to be of nearly three years' duration, consisting of progressive dementia. On admission she presented the appearance of a full, flabby-faced woman, almost suggesting œdema, expressionless, and with a generally bloated look. The pupils were contracted and did not react to either light or accommodation. There was neither optic neuritis nor atrophy. The reflexes appeared to be normal. Speech was so thick, indistinct, and slurred that even the pronunciation of her name was almost unintelligible. Muscular power was much impaired without any definite paralysis and she was sent to bed immediately after admission. Any sensory defects that might have existed could not be ascertained on account of her mental condition, though she appeared to be sensitive to pain. She was extremely fatuous and demented, lying in bed dull, listless, and uncomplaining, not seeming to appreciate where she was or to have any idea of her surroundings. She lay grinding her teeth, passing urine and fæces into the bed, and required every attention. At times she was restless. She was considered to be a general paralytic in the third stage, and the progress of the case for some time justified this opinion. From Dec. 1st to Dec. 4th she had an irregular febrile temperature, was lethargic, and could scarcely swallow. On Jan. 3rd, 1895, she had a slight epileptiform seizure affecting mainly the left side, and was more helpless and feeble. But now a remarkable change took place; the patient began to improve. On Jan. 20th she was reported as being slightly better, but very helpless still. On Feb. 4th the note says that she smiled fatuously when spoken to and appeared to understand more of what was going on around her. On Feb. 27th she was just able to sit up and was much brighter mentally. The favourable change progressed till at the end of April she was able to get about, though her face was still expressionless, her speech still somewhat slurred, and her manner childish and demented. In June she was reported as bright and cheerful, working well in the ward, and greatly improved as regards her general health. In fact, she was considered sufficiently convalescent to be discharged to the care of her friends. General paralytics, we know, may improve unexpectedly and to such an extent that their detention in an asylum is no longer warranted; but such an improvement as this woman, presumably in the third stage of general paralysis, showed has never yet, to my knowledge, been recorded. The diagnosis was therefore re-considered, but a better one was not arrived at, for convalescence was quite as unaccountable in any of the diseases which might possibly have simulated general paralysis. She was, then, to be discharged and the diagnosis suspended *sine die*, as it were; but on June 27th, a day or two before she was to have left us, a sudden change occurred. She was noticed to be looking dazed and ill and complained of severe occipital headache. This was the first occasion, be it noted, on which headache was complained of. She was sent to bed. The temperature was sub-normal, the pulse 84, and the respirations 19. There was no vomiting. The pupils were equal and contracted and showed a peculiar phenomenon. When the lids were raised by the examiner the pupils dilated to their utmost capacity, but after a few seconds contracted, or rather collapsed, with rapidity, only to dilate again after an interval of perhaps a minute previously to again contracting. This would be repeated periodically and apparently quite independently of the action of light or accommodation. The knee-jerk was absent, but the other reflexes were normal. During the following days the headache increased in severity. It was then I saw her for the first time and observed the conditions already noted. In addition, I found her crouched up in bed moaning, with injected conjunctivæ. Sensory aphasia (?) also appeared to develop as far as could be ascertained in her condition; she was easily roused and could well express her wants, but did not seem to understand what was said to her. She became more and more stuporose; there was slight rigidity of the muscles at the back of the neck; and a few days before death loss of power was detected in the right arm and some paresis of the right side of the face, while the leg remained apparently unaffected. No convulsive seizures were noted. She rapidly became comatose; Cheyne-Stokes respiration developed, and she died on July 10th, thirteen days after the onset of acute symptoms. The post-mortem examination revealed a startling condition of affairs. The dura mater was thickened and firmly adherent to the calvarium over the left hemisphere from the Rolandic fissure backwards. On carefully opening it a large number of almost spherical tumours were found growing from its inner surface on the left side. They attained their maximum development over the ascending parietal convolution, the whole parietal lobe, the upper half of the temporo-sphenoidal lobe, and over the mesial aspect of the hemisphere from the Rolandic to the calcarine fissure, in which region they were so densely clustered as to give rise to mutual compression. They were about thirty in number, ranging in size from the dimensions of a walnut to those of a green pea, the larger variety predominating. They merely compressed the hemisphere, in no wise implicating the cortex, being only here and there loosely attached to the pia-arachnoid. The corpus callosum and the mesial aspect of the right hemisphere were necessarily somewhat compressed. Not all the tumours were so clustered together; one or two were noted at more distant sites. A few of small size were found growing from the dura mater of the base in the left middle cerebral fossa, a large solitary growth on the dura mater covering the anterior surface of the left frontal lobe, and another of the same size springing from the posterior margin of the large wing of the right sphenoid bone. The tumours, covered by a thin, tense capsule, were pinkish-yellow on section, of a soft, fibrous structure, and slightly gritty to the touch. Their attachment to the dura mater was not particularly firm, a soft, felt-like base being left behind.

The bones of the skull were not affected. The direct effects of compression of the cerebral cortex were very marked, the grey matter being often reduced to a thin, dark greyish-purple line. Elsewhere the cerebral cortex, though a little congested, appeared healthy, particularly without even a suggestion of general paralysis. The membranes stripped readily; the lateral ventricles showed no granularity or dilatation; in fact, the rest of the brain presented no obvious morbid appearances.

Widely as these two cases differ from each other they have yet two points in common. One is the predominance of mental over bodily symptoms already referred to in the introductory remarks—dementia, with more or less excitement, being the form assumed. The other is the absence of headache, of optic neuritis or optic atrophy, and of vomiting. It is, however, such a well-recognised fact that these three cardinal symptoms may occasionally be wanting that it will suffice if I record it and pass to other points in the diagnosis. The facts of the first case are scanty. The patient was a quarrelsome, impulsive dement, possibly an epileptic, though no fits were recorded during his detention at Whittingham Asylum. All signs of intracranial pressure or of a distinct focal brain lesion were absent. The existence of the Cheyne-Stokes phenomenon was practically valueless and the only suspicious circumstance was the alleged epilepsy, as true "idiopathic" epilepsy rarely develops in the sixth decade. But cortical or subcortical thrombotic softenings are a frequent cause of epileptiform seizures at that time of life, and this consideration, together with the general aspect of the man—the glistening sclerotics, the dilated facial capillaries, and the chronic bronchitis—gave some colour to the supposed existence of such localised areas of softening. Apart from the question of diagnosis, some interest attaches itself to the site of the growth in this instance and to the symptoms manifested by it. Epilepsy—not Jacksonian—is of not infrequent occurrence in tumour of the frontal lobe and is apparently the effect of indirect irritation and pressure; the case is another instance of this, and in this respect presents nothing unusual. Far more interesting is the relation of the tumour to the frontal lobes as the seat of the higher organs of mind. Attempts have been made to assign distinctive clinical phenomena to morbid growths in this region. Marked enfeeblement of the mental powers has been credited with some diagnostic importance, but cases have been published in which great deterioration of the intellect has accompanied tumour growth elsewhere, whilst mine shows that a neoplasm may extensively invade one frontal lobe, may involve the other together with the corpus callosum, and yet give rise to only a moderate degree of mental failure. Bruns, who, in opposition to Ferrier, Allen Starr, and others, is not inclined to attribute to the frontal lobes a greater share in the higher intellectual faculties, might cite this case in support of his views; but another interpretation seems also possible. The tumour, as microscopic examination (see later) showed, was evidently of slow growth—allowing, maybe, the more intact right lobe to compensate to some extent the lesion in the left—and might have gone on growing for a further considerable period as far as the effects produced by it were concerned, had not an intercurrent disease cut short the patient's life. Now the rapidity with which an intracranial tumour runs its course in the absence of complications will depend upon its site and nature, while the multiplicity and severity of the symptoms manifested will, *inter alia*, depend upon the rapidity of its growth. A cerebellar hemisphere may, for example, be almost totally destroyed by an abscess of gradual formation, with no symptoms to point to such a lesion. Similarly, we have to deal in the present instance with a tumour which, by slowly destroying, rather than by compressing, the nervous structures had failed to increase the intracranial pressure to any great extent. We may, therefore, consider that the tumour had reached but a comparatively early stage of its life-history at the time of the patient's death. If this be granted, then the case is of value as corroborating the opinion lately put forward by Oppenheim and others, that tumour growth in the frontal lobes anterior to the præcentral gyrus is often characterised, not by the extent of mental impairment, but by the early onset of the same, frequently even before sensory or motor symptoms become manifest. The epileptic seizures alleged to have occurred in Case 1 must not be placed in the latter category—at least, not in the sense here employed; general epileptic convulsions are in such cases not a local manifestation, but as much a general symptom of organic brain disease as headache, vomiting, or a slow pulse. Whereas no suspicions as to the presence of a cerebral tumour were entertained in the first case matters were somewhat different in the second. For the sake of convenience we may consider the diagnosis in connexion with three distinct periods in the course of the disease—viz., on admission, at convalescence, and at the occurrence of the relapse which ended in death.

The difficulty on the first occasion lay in the intensity of the symptoms presented, while headache, vomiting, and optic neuritis were absent. True focal symptoms were also wanting, profound dementia, general paresis of the extremities and helplessness, with difficulty in swallowing and unintelligible articulation, being the most marked objective phenomena. Some fine distinctions have been drawn between the dementia of general paralysis and that of cerebral tumour; between the affections of speech in the two diseases; and between the modes of onset and the relation to each other of mental and motor symptoms. In cases of cerebral tumour the dementia is said often to assume the form of childishness; speech is said to be slow, thick, and laboured, and not so ataxic as in general paralysis, while motor symptoms are said to manifest themselves sooner than mental. Other and finer points of difference are said to exist; but, like the foregoing, they can only be of use in the diagnosis of cases not too far advanced. Progressive destruction of the cerebral cortex, whether due to a diffuse new growth or to the process underlying general paralysis, must gradually merge initial differences into the final and more or less uniform picture of loss of cerebral function. In no class of diseases is the knowledge of the mode of onset and development of symptoms so valuable as in affections of the nervous system. The paucity of historical particulars in the present instance was most unfortunate, depriving us, as it probably did, of important criteria. Two facts only in this period of the disease may be noted as exceptional if the case was one of dementia paralytica—namely, the absence of pupil reaction to both light and accommodation and the apparently normal condition of the knee-jerk. Both are uncommon in general paralysis; still, their comparative rarity was insufficient in itself to imperil the diagnosis. Then came that remarkable period of convalescence, during which the diagnosis "general paralysis" had to be re-considered. We have already stated that convalescence in the third stage of general paralysis is unknown, and that the diseases which could simulate general paralysis—namely, cerebral tumours, cerebral syphilis, "colloid disease" of the hemispheres, multiple sclerosis, lead paralysis, and other toxic conditions—all present the same difficulty. It is true that in multiple sclerosis some symptoms—e.g., oculo-motor paralysis—may disappear, and that others, such as dementia, may show some temporary improvement; but the absence of all other symptoms, such as tremors, nystagmus, &c., practically excluded it. None of the remedies deemed serviceable in some of the above had been employed, especially had mercurials and potassium iodide at no time been exhibited, treatment having been mainly expectant. Syphilis and lead-poisoning could, therefore, probably be excluded; of the latter there was, moreover, not the slightest indication elsewhere. Alcoholism was most unlikely, as she was stated always to have been temperate, as well as for other reasons. She was too young for that very rare affection "colloid degeneration" of the hemispheres, and pachymeningitis interna hæmorrhagica was most unlikely to occur at her age save as a complication of general paralysis. So only two diseases remained—general paralysis (with or without pachymeningitis) and intra-cranial tumour. Convalescence was in each case equally inexplicable, though we know that some tumours—sarcomata and psammomata among them—may undergo temporary involution under certain conditions, notably during the puerperium. There was nothing, however, to make us believe in such a remote possibility, and so the diagnosis was suspended for the time being. But on the occurrence of the relapse and the sudden onset of acute symptoms the question of diagnosis again came to the front, and the problem was to decide between an exacerbation of a hæmorrhagic pachymeningitic process, a "paralytic" seizure, meningitis of the vertex, or sudden increased tension in a cerebral tumour. The course of the disease, the steady progress from bad to worse without the occurrence of convulsions, practically excluded a "paralytic" congestive attack. No possible cause could be assigned for an acute meningitis (except a

tumour), quite apart from the fact that the temperature never rose above normal. There were thus left, as alternatives, a pachymeningitis hæmorrhagica or an intra-cranial growth. Both give rise to pressure-effects, both are of local origin, capable of causing focal symptoms, and both are liable to sudden increase in tension. If the case was one of pachymeningitis, then the possibility would gain ground that general paralysis was present after all—the third stage of that disease being simulated by the complicating meningitic process, while convalescence might have been brought about by the brain becoming accustomed to a pressure which had ceased to increase and which had possibly even diminished from some organisation and absorption of the effused blood. Whatever the nature of the brain-compressing tumour its position was clearly at or near the psychomotor areas of the left hemisphere. One fact, however, appeared difficult of interpretation: we refer to the left-sided epileptiform convulsion which had occurred some six months previously. A few isolated cases in which convulsions and paralysis have occurred on the same side as the cortical affection have, it is true, been reported by reliable authorities, but the more natural explanation in this case was to assume the bilateral nature of the lesion, differing probably in severity on the two sides, but yet in symmetrical positions. The lesion that most commonly fulfils these conditions is hæmorrhagic pachymeningitis. We therefore formulated our diagnosis to this effect: that the patient was suffering from cerebral compression, due in all probability to bilateral hæmatoma of the dura mata, complicating general paralysis. Further remarks on the case are, I think, superfluous. The only remaining point of interest would be the explanation of convalescence. The cortex of the left hemisphere—at least, a great part of it—was compressed and atrophic to such a degree as to indicate a process of some standing. The right hemisphere in all probability stepped in and gradually undertook some of the functions of the left, aided by a temporary cessation of growth in the tumour, and possibly by diminished tension; then sudden, increased vascular pressure may have rapidly brought about the fatal termination.

I have so far only considered the clinical aspect of these cases; a word or two concerning the microscopic appearances of the tumours may not be amiss. The first tumour was composed of masses of ovoid cells which were here and there arranged in strands separated by bloodvessels. It was microscopically sharply defined from the brain substance, into which it sent delicate, bud-like processes, rich in vessels, and gave us the impression of having sprung from the endothelial cells of the dura mater. The principal feature of interest was the presence of certain spherical bodies irregularly distributed throughout the tumour. They were, curiously enough, more plentiful in the younger parts of the growth, where they were frequently clustered together with just a few tumour cells intervening. Round their outer margin, which was clearly and sharply defined, one or two delicate spindle cells could almost invariably be seen and sometimes just a trace of fibrous tissue. These bodies took up various stains in various ways—some were dyed red, others yellow with picro-carmine, some light blue, others almost black by hæmatoxyline; alum carmine stained them in every shade of purple, while eosine gave them a fine pink tint. With iodine they assumed a golden yellow colour and no "amyloid" reaction could be obtained by any of the usual methods. Though the majority of these "corpora" were devoid of concentric striation, yet a goodly proportion showed it in various degrees. Calcification was not apparent. Here and there—instead of a spherical body—an elongated, curved, rod-shaped structure could be noted, fractured transversely in places and responding to staining re-agents in all respects like the former. A double process appeared to underlie the formation of these bodies; the greater number of them appeared to have resulted from a sort of obliterative endarteritis leading to occlusion of the vessel and ending in a degeneration of the inflammatory products—perhaps a form of coagulative necrosis. The other process, which, however, plays a very subordinate *rôle*, is a hyaline degeneration of the vessel-wall; it is limited to the periphery of a few of the bodies and forms a thin ring there. I have stated that in the older portions of the growth the tumour-cells were separated into strands by intervening vessels. This formation is much accentuated by the fact that nearly all these vessels present an advanced stage of hyaline degeneration; their walls are often ten or more times as thick as in the normal, have here and there almost occluded the lumen, and have pushed the tumour-cells aside. In one or two places only scattered remnants of the latter have survived, and all that can be seen is a mass of hyaline material, the vascular origin of which is recognisable only on closer examination and best by means of eosine-staining of formol-hardened specimens, in which the well-preserved red blood-corpuscles are conspicuous by their brilliant scarlet. If the areas illustrating the first process were to be alone submitted for examination one would probably be inclined to name the tumour a "psammoma"; if the areas demonstrating only the last, a "cylindroma." But we have here a mixture of the two; and it would appear that vessels which have become subject to the hyaline change to any extent are exempt from the endarteritic process and *vice versâ*. Why this should be we do not know and do not wish to speculate. Curiously enough, the tumours in Case 2, which were composed of long, almost fibrous spindle-cells, presented to some extent a parallel. The older growths contained a multitude of spherical bodies similar to those in the last case, but mostly calcified, and presenting besides an almost constant concentric lamination, also a delicate radial striation in some few instances. Treatment with hydrochloric acid of such bodies as were not too old revealed what appeared to be the remains of nuclei; and in the tumours of younger formation a process of obliterative endarteritis could again be noted, evidently the precursor of the "sandy" bodies. Neither in this case nor in that of Case 1 was there any evidence that the spheres resulted from the conglomeration of tumour cells. I have ventured to enter into these details as the classification and nomenclature of such tumours are still in a lamentable state of confusion. I do not pretend to say that all so-called "corpora amylacea," "corpora arenacea," &c., are the results of an endarteritis; two cases would be obviously insufficient for such a statement. But I am strongly of opinion that the terms "psammoma," "cylindroma," &c., are misleading. The structures from which these names are taken may occur in tumours of diverse characters—e.g., in mammary carcinoma, in ovarian, parotid, and omental tumours, as well as in tumours of the brain, and may even, as the first specimen showed, appear side by side in one and the same neoplasm. Those that result from endarteritis are perhaps the expression of a "senile" change in tumours of slow growth. Their greater frequency in some tumours than in others would appear to depend upon the differences in the rate of growth, which is, again, dependent, not only on the variety of tumour, but on the site of development; hence the difference of opinion whether a "psammoma" should be ranked among the sarcomata or whether it should constitute a class of its own. I am of opinion that these tumours do not constitute a special class, and that if the terms are to be used at all they should be employed in the adjectival form, such as "psammomatous sarcoma," "psammomatous glioma," "cylindromatous endothelioma," &c. "Angiolithic sarcoma," a name suggested by Cornil and Ranvier for certain forms of growths, would similarly have its advantages.

Whittingham.

## TWO CASES OF ECTOPIC GESTATION IN WHICH RUPTURE OF THE SAC TOOK PLACE IN THE THIRD WEEK; ABDOMINAL SECTION IN ONE CASE; RECOVERY.

BY HASTINGS GILFORD, F.R.C.S. ENG.

RUPTURE of the sac of an ectopic gestation under the age of one month is statistically very uncommon. Thus of 300 instances of this accident collected by Hecke and Cauenbirge[1] only two were at this period, one being of three weeks' duration and the other of fifteen days. Parry[2] out of 174 cases of rupture gives one which occurred at three weeks, and states that "the earliest period mentioned is three weeks," but afterwards goes on to say that "Rokitansky has known rupture to occur within a fortnight after conception." In the experience of Mr. Lawson

[1] American System of Gynæcology, vol. ii., p. 184.
[2] Extra-uterine Pregnancy, p. 174.

Tait[3] "the period of rupture is limited between the fourth and twelfth weeks of pregnancy." Very few instances are reported in medical literature. In some of them it is difficult to ascertain the duration of pregnancy even when an examination of the sac has been made, owing to the loose standard of measurement made use of. Thus Dr. Montgomery[4] has published a case in which a cyst "of the size of a cherry" was found in the left tube at an operation for a rupture which occurred five weeks after menstruation. One which was estimated to have been of three weeks' duration is also reported by another observer, who writes that the sac was of the size of a hazel nut. Dr. Richards of Mass.[5] in publishing a case, which he also computed from the date of the last menstruation to have been of three weeks' duration, found the right Fallopian tube dilated to the size of an olive. Dr. Martin[6] describes a case in which the sac was of the size of a pigeon's egg and in which the period of pregnancy was estimated to have been about four weeks.

Now comparisons of this sort are almost necessarily inaccurate owing to the fact that people vary widely in their estimates. Thus I have known the size of one and the same growth to be compared by one observer with a walnut, by another with a cobnut, and by another with a pigeon's egg. And when such estimates are brought to the test of actual measurement it is surprising how wide of the mark they are sometimes found to be. Moreover, many of these common domestic articles vary greatly in size. Some varieties of cherries or of nuts are almost double the size of other varieties, and olives probably vary as widely. The average length of some hazel nuts that I measured was 17 mm., and of some cherries nearly the same. Waldeyer,[7] who measured an ovum and membranes of the age of "exactly four weeks," found the length to be 19 mm. It is therefore probable that the age of three weeks assigned to the first and second of the above cases was approximately correct; but in the case of the third, if the enlargement were due solely to the ovum and its membranes, the estimate of three weeks must be wrong, for an olive measures 30 mm. in length. If ample allowance be made for the thickness of the sac wall the ovum could not have been under the age of a month; nor is it likely that a sac the size of a pigeon's egg could have been of only four weeks' growth, for the egg of the common blue rock has a length of 36 mm. This is midway between the 42 mm. of the wood pigeon's and the 30 mm. of the turtle dove's. The mistakes which may arise from this vague method of measurement are well shown in some estimates attributed to Smolsky and which I have seen quoted in more than one publication with approval. He is said to have observed that the sac of a tubal pregnancy reaches the size of a pigeon's egg during the first month, while at the end of the second month it approximates to that of an English walnut; in other words, the length of the pigeon's egg being 36 mm. and that of the common English walnut 32 mm. (it varies from 26 mm. to 38 mm.), the sac is no larger at two months than it is at one month!

But the opinion now held by gynæcologists is, I believe, that rupture under the age of one month is by no means so unusual as the older statistics lead one to suppose. Recent statistics of German writers show a much larger proportion of ruptures at this early period, and there are reasons for believing that many cases are undiagnosed. 1. In the first place, the fact that the diagnosis of ectopic gestation is commonly based on the presence of one or more of the symptoms of pregnancy may become positively misleading when we have to do with a case in which they have not had time to develop. 2. Then certain other symptoms, which are common to all cases after the lapse of a month, may before then be absent, particularly alteration in the character of menstruation and pain.[8] 3. Mistakes may also arise from the absence of a tumour. The sac in these early cases is so small as to be unrecognisable by external examination. In my second case I was unable to find the sac even before rupture, though I examined the Fallopian tubes carefully. 4. There is another sign which is so often present that its absence may be a special source of error. This is hæmatocele. It is so customary now to associate pelvic hæmatocele or hæmatoma with the rupture or abortion of the products of an abnormally situated pregnancy that there is a tendency to regard the one as the necessary concomitant of the other. Indeed, while in most text-books a bulging of Douglas's pouch is given as a consequence of rupture, no mention is made of the fact that this important symptom may be absent. One probable result of this serious omission is that some of these cases remain undiagnosed owing to the fact that there is no local sign of pelvic hæmorrhage. In neither of the following cases was there any evidence of a collection of blood in Douglas's pouch, though in one there was a small swelling in the broad ligament. This symptom was also absent in another case I once saw, in which rupture took place at the end of the ninth week, and in which the patient made a marvellous recovery after being seemingly in articulo mortis. Absence of one of the above factors may render diagnosis difficult; but when, as in one of the following cases, there is no indication of pregnancy, no sign of a tumour, and no obvious collection of blood in the pelvis, and in which all the symptoms are abdominal and not pelvic in character, an exact diagnosis is hardly possible. These two cases afford a good illustration of the rule that the indications of rupture are almost as severely fulminating in character in those of early as in those of later date. Mr. Bland Sutton,[9] who has thrown so much light on this subject, writes of an instance in which intense collapse ensued on the rupture of a sac containing a tubal mole of 8 mm. long. But it is asserted by others[10] that the symptoms may be quite insignificant. I have, however, been unable to find the report of any such case except one which has also been published by Mr. Bland Sutton in which the sac was ruptured at about the third week and the symptoms were slight.

CASE 1.—A woman, aged twenty-eight years, who had had a natural labour two years previously, sent for me to attend her for a supposed miscarriage. I found that the last menstruation had commenced seventeen days before and had run its usual course in four days. The next day, however, the flow returned and continued without cessation up to the time I saw her. It was small, but variable, in quantity, and was neither shreddy nor attended with pain except the usual sacral aching that she always felt when "unwell." She herself was convinced from her feelings that she was pregnant, but there were no other indications of pregnancy. On bimanual examination I thought the uterus was somewhat large, but a careful examination of the ovaries and tubes failed to reveal anything amiss. Connexion had last taken place two days before the period and not for about a fortnight before. I attached much importance to her own indescribable feelings of having conceived, and looking upon the case as one of very early abortion thought of dilating the os and curetting. The next day, however, under the influence of rest in bed, both backache and bleeding ceased, and on the seventh day she went downstairs. On the evening of this same day she had risen from a sofa, and was on her way to the kitchen when she shrieked out with a dreadful pain in the left iliac region and dropped down in a faint. At the same time the uterine bleeding returned, but finally ceased in a few hours. When I saw her about an hour afterwards she had been sick and was of a deathly pallor, while her skin was covered with a cold clammy sweat. The pulse was small and too frequent to be counted. She, however, speedily improved under the influence of a small dose of opium, and I left her fairly comfortable in bed, with directions that I should be sent for if the symptoms returned. No examination was made for fear of inducing fresh local bleeding. Early the next morning I received a message from the husband, saying that she had "passed a terrible night, vomiting and fainting the whole time. Is extremely weak; she seems utterly to have collapsed." I now made a vaginal examination, but the universal tenderness and rigidity of the abdomen were such as to render a satisfactory investigation impossible. I could detect no swelling and the uterus was freely moveable. It was decided that if she did not speedily improve an operation would be advisable. She had, however, no fresh symptoms, and three days after the accident was so much better than she looked and felt almost as well as before it occurred. I now very carefully made a vaginal examination and detected a hard, round, and moveable swelling in the left

[3] Diseases of Women, p. 440.
[4] Transactions of the American Association of Obstetricians and Gynæcologists (Sajous, 1891).
[5] Annals of Surgery, December, 1894, p. 718.
[6] Berliner Klinische Wochenschrift, No. 22, 1893.
[7] Spiegelberg's Midwifery, vol. i., p. 115.
[8] Dr. Tuttle: Transactions of the American Association of Obstetricians and Gynæcologists, 1891, p. 402.
[9] Brit. Med. Jour., March 30th, 1895.
[10] Dr. Condamine: Lyon Médicale, 1894, p. 317.

broad ligament. It seemed to be about 20 mm. long and was tender on pressure. Its inner end was close to the uterus, but the two could be differentiated by the finger. During the reaction from shock the temperature rose to 100·5° F., but it soon dropped to 99·5°, and did not again rise higher, though it was more than six weeks before it became permanently normal. The swelling gradually diminished in size, but did not disappear until after the lapse of nearly three months.

CASE 2.—This woman was aged thirty-three years and had been married thirteen months. Nine months before she had miscarried of a three months' child and had been very ill with fever and offensive discharge until the products of conception came away. Menstruation then became regular but painful. She menstruated fourteen days before the accident in the usual manner, but was a week over her time. On the evening of Aug. 22nd she ate a quantity of unripe plums. At 9 P.M. she was straining at stool when she felt as if something gave way in the "small of her back." This was instantly followed by such shock and agonising pain in the abdomen that she had great difficulty in getting to her bedroom. Dr. Abram was now sent for, and when he arrived she was retching and vomiting almost incessantly, and was complaining of intense pain, mainly referred to the regions of the sternum and shoulders. It came on in paroxysms and was accompanied with faintness and increasing feebleness of pulse. Her extremities were cold and lips blanched, and she tossed about in perpetual restlessness. The temperature was subnormal. The abdomen was full, but not distended, and was uniformly tender except in the epigastric region, where it appeared to be more sensitive than elsewhere. The following day the abdomen was fuller and a shifting dulness was noticed in the left flank. A bimanual examination revealed nothing to account for her symptoms. Dr. Abram considered her condition to be the result of hæmorrhage and asked me to see her with the view of performing abdominal section. We found it impossible to arrive at a satisfactory diagnosis. Dr. Abram inclined to the view that there might be a perforated gastric ulcer attended with hæmorrhage. This opinion was supported not only by the mode of onset, situation, and character of the symptoms but by the fact that they had set in apparently as the result of a highly injudicious meal. I, on my part, supposed from the quantity of fluid that was evidently present in the abdomen that the symptoms were, perhaps, due to the twisting and rupture of a latent ovarian cyst. We both agreed that in the event of the continuance of the symptoms the patient's chances of recovery would be improved by an exploratory incision. Late in the afternoon, as there was no improvement, we decided to operate. On opening the abdomen between the navel and the pubes a rush of dark blood took place through the wound. On inserting the hand the fingers came down upon a pedunculated fibroid situated in the fundus of the uterus. It was round, of about 40 mm. in diameter, and was broken off without bleeding. The middle of the left tube was then found to be expanded into an oval swelling 12 mm. in length and split along its upper surface for nearly its entire length. Its inner surface was shaggy and its walls averaged about 2 mm. in thickness thinning off to a paper-like tenuity at the edges of the rent. No bloodvessels could be seen, nor could a probe be introduced into the expansion from either end. The rest of the tube appeared to be healthy and was neither constricted nor dilated and the fimbriated extremity was open and unaltered. The ovary was slightly enlarged and was afterwards found to contain a recent corpus luteum. The right tube and ovary were found to be healthy. The left were both removed after the application of a silk ligature. The abdomen was flushed out with boiled water. The blood and imperfectly formed clots probably amounted to more than two litres. The washings were unfortunately thrown away by mistake before they had been inspected for the ovum. The stomach was examined but no ulcer was found. No drainage-tube was used. The patient did well until the fifth day, when the temperature began to rise. It became progressively higher until the tenth day, when there was a discharge of pus into the rectum, and from that time the patient made an uninterrupted recovery.

*Remarks.*—Case 1 was seen on the third day by a very able gynæcologist, who pronounced it to be one of simple para- and peri-metritis, basing his opinion chiefly on the absence of the indication of pregnancy. But I consider this a good instance of the way in which these early tubal ruptures may be overlooked. I myself now know that I once made a similar mistake. A woman came to me three months after a "miscarriage" subsequent to amenorrhœa of six weeks' duration. It was attended with very severe symptoms, which, she said, were attributed by the medical attendant to the fact that "nothing ever came away," though it appears that there was bleeding from the uterus of three or four days' duration. I found the uterus to be embedded in a plaster-like mass, which I thought consisted of distended tubes and ovaries matted together with inflammatory material. She subsequently went into a hospital but came to me again on her discharge. That which I took to be inflammatory material had then disappeared, and the uterine appendages were distinctly swollen and painful. At the operation which I afterwards performed both tubes were found to contain blood, one being distended like a sausage, while in the other it was circumscribed into a rounded cyst of about 30 mm. in diameter. I greatly regret that this specimen was subsequently thrown away, for I now think it may have been an instance of double tubal pregnancy, though the way in which one tube was distended for nearly its whole length with clot is suggestive of some other cause for the hæmorrhage in one side. That which I regarded as the effusion of pelvic cellulitis I now suppose was really coagulated blood. The case was a lesson to me on the pathology of some cases of so-called parametritis.

In Case 1 detailed above it may well be asked if it were not an instance of incomplete tubal abortion, but the fact that the swelling was apparently at the uterine end of the tube was against this assumption. Moreover, all such cases should surely be classed under the head of rupture unless there is ocular proof that blood has found its way into the peritoneal cavity through the mouth of an unruptured tube. It is well known that Mr. Lawson Tait is sceptical of the possibility of a true abortion from the Fallopian tube comparable with that from the uterus. Certainly in some of the cases which have been brought forward by the Germans as instances of tubal abortion it is distinctly stated that the tube was torn. I prefer to look upon this case as one in which there were either successive gushes of blood through a rent in the sac or into a small adventitious sac in the broad ligament. In the former case the nodule felt by the finger would be a tubal mole or hæmato-salpinx; in the latter a hæmatoma. Although there was no direct evidence of the effusion of blood into the peritoneal cavity, yet the symptoms were so much more consistent with this hypothesis that I have no doubt it was what actually took place.

With regard to Case 2, in some books it is stated that the bulging of a hæmatocele may not be felt at an early period owing to the blood being in a liquid condition; but in the course of a few hours, when coagulation has set in, it will be evident. But that this is not the explanation in all instances is well shown in the case under notice, for it was found at the operation that nearly all the blood, both clotted and fluid, came from the left flank and that not so much as an ounce was found in the retro-uterine pouch, though there were no adhesions to prevent its reaching this situation. Probably when rupture took place the blood immediately dropped into the most dependent part, which then happened to be Douglas's pouch; but afterwards, when the patient was on her side, it shifted into the left flank, being helped on its way by her restlessness. Subsequently it was kept from again getting into Douglas's pouch by the distension of the intestines. This is similar to what is observed in perforated gastric ulcer and other accidents in which fluids are poured into the peritoneum. And every surgeon who has irrigated the abdominal cavity knows how difficult it sometimes is to get fluid to pass the barrier of neighbouring coils of intestine when they are distended with flatus. The accident occurred in this case apparently as the result of straining at stool, but it is quite possible that a slight rupture had really taken place before and was the cause of the desire to defecate, for the patient did not actually get relief and nothing was felt in the rectum on vaginal examination afterwards. In this case there may have been a gradual oozing of blood, either into the sac or through a small rent, followed by sudden completion of the split during the act of straining. That this is probably the true explanation is suggested by the report of another case of rupture in which the first symptom was the sensation of the pressure of a hard substance obstructing the rectum and causing a desire to defecate.

Reading.

## A QUESTION FOR ANÆSTHETISTS.

BY R. CLEMENT LUCAS, B.S. LOND., F.R.C.S. ENG.,
SURGEON TO GUY'S HOSPITAL.

IT must have occurred in the experience of almost every hospital surgeon that a day or two after an operation of very trivial character, where an anæsthetic has been administered, the patient's temperature has been observed to rise very high, the wound has been examined and found perfectly quiescent, devoid of every indication of inflammation, and completely healed, yet the skin is burning and the patient obviously ill; next a little cough is noticed and soon rusty sputum is coughed up, indicating pneumonia. These cases have occurred too frequently in my experience to be explained either upon the hypothesis of infection prior to admission into the hospital or upon the conjectured basis of chill taken at the operation, where every precaution has been taken to obviate unnecessary exposure. I have noticed it happen on several occasions after operations for hernia, when it might be suggested the patient's resistance might have been lowered by previous vomiting; but I think I may say that I have observed it as frequently after many other operations of more trivial character. The most recent case, at present under my care in Guy's Hospital, is that of a healthy young man admitted for what is now one of the commonest and simplest operations, the aseptic excision of a varicocele. Gas and ether were administered on Feb. 4th and the varicocele was excised, and the wound closed and dressed with aseptic pads. His temperature rose and on the 6th it reached 103° F. His wound was examined and found to be perfectly quiet. On the 7th he began to expectorate rusty, blood-stained sputum, and the expectoration on being examined was found to contain the pneumococcus.

It may, of course, be said that this young man was in the incubation period of pneumonia when admitted, and that he simply developed it in the ordinary course after the operation, but I think these cases, though occurring apparently sporadically, do occur too frequently in hospital practice not to have some other explanation. Gas and ether, it may be urged, are powerful stimulants to the lungs, and sufficient to account for subsequent inflammation. Undoubtedly bronchial conditions frequently follow their administration of sufficient severity in old people to prove fatal. But here is a young, healthy man clearly infected with the infective germ of pneumonia. He was operated on in a well-warmed theatre and placed in a bed on the most protected side of the ward. But apart from this, exposure to cold can no longer be regarded as a sufficient cause of pneumonia. It can only predispose thereto. One might as well argue that cold would cause phthisis without any exposure to the tubercle bacillus.

The question I wish to ask of anæsthetists is whether the apparatus used by them may not sometimes be responsible for germ infection of the lung? I speak of hospital practice, now, where some dozen apparatuses are being constantly employed, carried from patient to patient without any attempt at sterilisation. Considering the enormous advance made of late years in every department of surgery for the better disinfection of everything brought into contact with a wound, it has struck me as somewhat marvellous that so little improvement in this direction has been made by those responsible for the inhalers used for giving anæsthetics. I have often thought it not altogether pleasant to see an anæsthetist blow out and distend the large bag used for ether administration by the breath of his own body, however sweet that may be, and then apply it directly over the patient's mouth. But as matters stand now there is no apparatus used in hospital practice, so far as I am aware, for the administration of either the A.C.E. mixture, or gas, or ether, which is capable of being boiled, or which is otherwise disinfected before being applied over the mouth. If, as I am suggesting (and it may be capable of bacteriological proof), that the apparatus used for giving the anæsthetic, and not the anæsthetic itself, may be responsible for lung infecting inflammations, then some radical change will soon have to be made in the apparatus, which, going from mouth to mouth as at present, seems capable of carrying infection of a kind such as I have indicated.

Wimpole-street, W.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### RARE CONGENITAL MALFORMATIONS.

BY C. KESSICK BOWES, M.B. OXON.

ON Dec. 30th, 1896, a woman was delivered of a female child at full term after a natural labour, this being her second confinement. Directly the child was born I noticed that the hands presented a very unusual appearance, the fingers pointing upwards towards the elbow, and on examination I found that there was entire absence of both radii and both thumbs. When at rest the outer side of each hand—i.e., the index finger and its metacarpal bone—rested against the forearm, but by manipulation the hands could be brought down at right angles to the forearm, but no further, and there was great resistance to supination. The ulna in each arm was a little curved and seemed shorter than normal, but in all other respects the child seemed to be perfectly developed. On the third day, as soon as the mother's breasts became full of milk, she noticed that as the baby sucked the nipple, after drawing two or three times, the milk returned through the nose, and she had to take her from the breast. I examined the child's mouth and found nothing to account for it, and as this regurgitation continued, and the child began to waste, I suspected some obstruction in the œsophagus. I did not pass a bougie, as the nurse told me that the child had frequent attacks of cyanosis with much choking, and she seemed so fragile and weak that I did not think it would be wise to attempt it. In this way she continued to live, but gradually wasted, and eventually died from exhaustion when thirteen days old.

I obtained permission to make a post-mortem examination and found that the upper part of the œsophagus was simply a cul-de-sac extending about three-quarters of an inch below the larynx, and that the lower part, as it came up from the stomach, opened into the trachea near the point of its bifurcation. The stomach and intestines were quite empty and very thin, just as one would expect to see them in a case of starvation. On opening the heart I found that the interventricular septum was not complete, being deficient in its upper part.

The case is an extremely interesting one, not only on account of the rare malformations, but also on account of the length of time the child lived without any nourishment whatever.

Herne Bay.

### POISONING FROM EATING ROOT OF SCARLET RUNNER BEAN.

BY J. S. MACPHERSON, L.R.C.S., L.R.C.P. EDIN., L.F.P.S. GLASG.
MEDICAL OFFICER, UGANDA PROTECTORATE.

THE following account of poisoning from eating the root of scarlet runner bean may be of interest to the profession, as I am not aware of any similar previously recorded case.

On the night of Nov. 18th, 1896, a large number of our garrison, comprising Soudanese soldiers and their wives and Swaheli porters, partook of a small quantity of the root of the scarlet runner bean, which had been collected by our native gardener. Several of the men had the root roasted, while others, probably the majority, simply ate it in the raw state. In a short time—i.e., within a couple of hours—they were all seized with symptoms of poisoning, twisting pain in the stomach and violent vomiting, accompanied by vertigo and prostration. As there was nothing to indicate the precise nature of the poison I had at once recourse to an emetic of thirty grains of zinc sulphate largely diluted with hot water, resulting in prompt emesis with immediate beneficial results. The following morning most of them simply complained of vertigo with an uneasy, twisting stomachic pain, though several suffered more than others from prostration and weak

cardiac action. The administration of a purgative dose of sulphate of magnesium with the addition of a few drops of diluted sulphuric acid removed all remaining symptoms, though the vertigo lasted in several cases for from twelve to eighteen hours from the time of eating.

There could be no mistake as to the root in question being that of the scarlet runner bean, as it was planted by ourselves from London seeds and grown in the garden amongst peas, cabbages, and cauliflower, and I cannot conceive unless the root is *per se* poisonous, how it could have absorbed poisonous material from any neighbouring plant. I may mention that the bean itself was largely partaken of by ourselves and we never observed any noxious effect. I forward you a specimen of the root in question, also the plant and bean for analysis. Possibly the deleterious substance may be analogous to that contained in the poisonous variety of cassava or deadly manioc root which is referred to in Mr. Stanley's book "In Darkest Africa."

Ravine Station, Uganda Protectorate.

## CHILD IN UTERO CRYING DURING LABOUR.

By E. FITZGERALD FRAZER, L.R.C.S., L.R.C.P. IREL.

I WAS in attendance on a case of twin labour here recently where I applied the forceps to the head of the first coming child. Whilst using gentle traction, and the vertex being still upon the perineum, I was surprised, as was also the nurse, to hear the child cry. At first we thought we were deceived, but in a very short time after the sound was repeated, and before any part of the head was born the same phenomenon occurred several times. Nothing unusual happened during the birth of the second child, which came away naturally. I cannot say whether the pressure of the forceps had anything to do or not with causing the crying. There were no marks of it on the head and the boy is doing well. This instance illustrates the possibility of uterine breathing, as otherwise I cannot see how the vocal cords could have been called into play. I attribute the entry of air into the lungs as having taken place during the time I was putting the forceps into place in doing which no difficulty presented itself. Thinking the particulars may be of interest to the readers of THE LANCET I have pleasure in submitting them.

Brighton.

# A Mirror
OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

**Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.**

## ROYAL UNITED HOSPITAL, BATH.

### A CASE OF ULCERATIVE ENDOCARDITIS TREATED BY ANTI-STREPTOCOCCIC SERUM.

(Under the care of Dr. A. E. W. FOX.)

THIS case illustrates one of the more severe types of malignant endocarditis. It is published to show the results of the injection of anti-streptococcic serum, the use of which was decided upon from a perusal of the notes of a successful case which we brought forward in the Mirror of Hospital Practice. The duration of illness before treatment by the serum was about the same in both cases, but the symptoms had been more severe in this patient. The value of the treatment will most probably be found to depend largely on the time the disease has existed before the treatment is commenced. The difficulty consists in making an early diagnosis; but when the diagnosis has been successfully made the method of treatment by the serum has proved of great value in other forms of septicæmia. The publication of cases in which it has been tried, if they illustrate important points, is of much value, although the ultimate result may not be satisfactory. For the notes of this case we are indebted to Dr. W. H. Cooke, resident medical officer.

A man, aged thirty-six years, was admitted to the Royal United Hospital, Bath, on Nov. 17th. He stated that he had not had rheumatism or syphilis; he had been an abstemious man and always lived in England. His illness had commenced seventeen days previously with cold shivers and pains, which commenced in the back. These pains disappeared from the back with the aid of strong turpentine embrocations, but reappeared in the limbs and head. He had had cold shivers daily and became very feverish. There had been no vomiting or diarrhœa. His urine was examined three days before his admission; it smelt strongly of violets. Cold nitric acid produced a cloud, which appeared at the top of the urine first and cleared up on boiling. This was considered as due to turpentine absorption. There was no albumin. On admission to hospital on Nov. 17th he was found to be well-nourished. His complexion was pallid and muddy. The conjunctivæ were slightly jaundiced. The tongue was slightly coated, white, and moist. The temperature was 101·8° F.; the left pulse 100, of good strength; and the respiration 20. There was no distress of any kind, but he complained of some pain in the right arm and right occipital region. There was no rheumatic odour, no œdema of the legs, and no effusion into any joint. The right radial artery was not pulsating and a clot could be felt in the middle third of the brachial artery. It was not tender. The anterior and posterior tibial arteries of both legs were pulsating. The chest was well formed, resonance was good, and the breath-sound normal. As to the heart, relative cardiac dulness commenced at the third left rib and was absolute at the fourth. The apex was in the normal position. At the apex the first sound was reduplicated and the second part of it ended in a slight whiff; the second sound was pure and distinct. At the base, over both the pulmonary and aortic valves, a faint soft systolic murmur was audible. With regard to the spleen, dulness commenced at the upper border of the eighth rib and continued to the lowest border of the ribs; it could not be felt. The liver dulness was increased downwards. The urine was of normal colour, 1020, acid, with no albumin. On the 18th the temperature at 8 P.M. rose to 104·6°. He did not shiver, but sweated profusely. There was no rheumatic odour. On the 19th there was no change in the cardiac signs. On the 20th he had had much pain in the calves during the preceding night. There was no blocking of the anterior or posterior tibial arteries. He was sweating profusely. The bowels were rather constipated. He had been given an injection of 10 c.c. of anti-streptococcic serum on the previous day at 1 P.M. There was no rash or any other discomfort from the injection. On the 21st the pain in the legs had gone. He was sweating profusely. He took nourishment well. The urine was 1020, acid, with a trace of albumin. The systolic murmur at the apex of the heart was becoming more distinct. On the 22nd he had had a better night, but felt rather faint in the morning. He had had some return of the pain in the calves. On the 23rd he had two injections of 10 c.c. each, and similar injections were now made every day. The systolic murmur at the aortic orifice was soft, whereas at the pulmonary orifice it was rough and loud (? two separate murmurs). The pulmonary was louder than the aortic second sound. A loud, rough systolic murmur was heard in the mid-sternal region, probably exocardial. On the 24th he was not so bright in the morning; he had had a bad night. The murmur at the apex of the heart was becoming louder and rougher each day. On the 25th he sweated profusely. There was no pulsation in either of the tibial arteries or the popliteal of the left leg. The leg was only slightly cooler than the right. On the 26th there was no change. On the 27th he felt a little better. The systolic murmur at the base of the heart was now loudest over the aortic orifice, the second sound being short and sharp. The British Institute of Preventive Medicine reported of blood taken from the left arm three days previously: "Streptococci not found either microscopically or by cultivation. No micro-organism has been isolated." On the 28th he felt and looked a trifle better. He had not had a good night. About the lumbar and lower scapular regions much boggy œdema had appeared from the numerous injections in the scapular regions. The left leg and right arm were of the same temperature as the corresponding limbs. On the 29th the injections were left off. On the 30th the temperature, which fell to 100·4°, had risen again

to 103·6°. The heart's action was not quite regular. At the aortic orifice the systolic murmur was now very loud and rough, as also at the apex. He now had to be propped up in bed. On Dec. 1st he was worse. He had been delirious during the night. He was drowsy throughout Nov. 30th and was rather deaf in the morning of Dec. 1st. He now had diarrhœa. The injections were continued. On the 2nd he said he felt better, but was evidently worse. At 2 P.M. he was much worse and was cyanosed. The heart's action was irregular and the pulse very small. He had dyspnœa. At 5 P.M. he died. The temperature varied from 98° on the morning of the 19th to 104·6° on the evening of the 18th, but was generally over 103° at night and above 100° in the morning. The influence of the serum was apparently *nil* as regards the temperature record.

*Necropsy.*—The body was well nourished and muscular. Rigor mortis was present. There was no œdema. The pleuræ contained about a pint of ordinary serous fluid each side. There were a few recent adhesions both sides. The right lung was normal. There was much recent lymph on the surface. With regard to the left lung the whole of the lower lobe was airless and in a state of hypostatic congestion. The pericardium contained from 3 to 4 oz. of clear fluid. There were a few patches of recent lymph. The heart weighed 14 oz.; it was enlarged; there were three patches of recent lymph, the largest being on the right

Left ventricle cut open to show the large mass of vegetations in the aortic valves. (From a photograph.)

ventricle. Both the right auricle and the right ventricle were dilated. The tricuspid orifice admitted four fingers; there was no deposit or ulceration. The left ventricle was hypertrophied and dilated; the mitral orifice admitted three fingers; there was no deposit or ulceration. Almost entirely blocking up the aortic orifice was a vegetation which appeared to arise from the base of the left posterior aortic valve. This vegetation was of the size of a walnut and measured about 1 in. in depth and ¾ in. in breadth; it was covered by recent blood clot. The base of the valve was replaced by vegetation. There were two softened spots in the endocardium immediately beneath the vegetation. This growth extended on to the surface of the anterior valve between which and the right posterior valve there was an irregular calcareous deposit. There was slight atheroma of the aorta. The coronary arteries were not blocked. The spleen was very large, pulpy, and grumous; it was taken out in pieces and weighed about 20 oz. It was so much broken down and disorganised that no infarct could be discovered. The liver was enlarged and weighed 71 oz. It was congested and fatty. The right kidney was moveable and weighed 9½ oz.; the capsule peeled easily; there was a white infarct. The kidney was much congested. The left weighed 6 oz. and he capsule peeled easily; there were several white infarcts; it was much congested. Examination of the head was not allowed. The right brachial artery was dissected out, but unfortunately was lost. The staff of the British Institute of Preventive Medicine very kindly examined a section of the vegetation and found numerous streptococci.

*Remarks by* Dr. FOX.—The general aspect of grave illness presented by this patient, his rigors, sweats, type of pyrexia, enlarged spleen, cardiac murmurs, and embolic blocking of his right brachial artery pointed conclusively to the diagnosis of ulcerative endocarditis. We therefore determined, encouraged by Dr. Sainsbury's successful case, to try the effects of the anti-streptococcic serum. This treatment was begun as soon as we obtained the serum—on Nov. 20th—when 10 c.c. were injected. In all he had twenty injections, the result being that he certainly looked brighter and said that he felt better. Though the sweats continued the temperature no longer showed such marked fluctuations. The report from the British Institute of Preventive Medicine upon the blood taken from his left arm on Nov. 24th stated: "Streptococci not found microscopically or by cultivation. No micro-organism has been isolated." This was after twelve injections of the serum. Though no streptococci were found in the blood, nevertheless after death streptococci were discovered under the microscope in the vegetations. These streptococci were so embedded in the vegetation that it is difficult to understand how they could have been acted upon by the serum. The fatal termination of the case was no doubt attributable to the almost complete blocking of the aortic orifice by the huge vegetation with its surrounding blood clot. In my own limited experience of ulcerative endocarditis, which began in 1878, when I published my first case in THE LANCET,[1] all treatment has been absolutely futile. I think, therefore, that more help is to be expected from the bacteriologist than from any other direction and I shall certainly give a further trial to the serum treatment.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

*Ringworm Fungi.—Exhibition of Specimens.*

A MEETING of this society was held on Feb. 16th, the President, Mr. BUTLIN, being in the chair.

On the motion of the PRESIDENT a resolution was passed expressing sympathy with the family of the late Mr. G. D. Pollock, a former president of the society.

Dr. COLCOTT FOX and Dr. BLAXALL gave a demonstration of the Plurality of Fungi associated with Ringworm. Microscopical specimens and over forty lantern slides were exhibited. They had examined over 400 cases, clinically and culturally, macro- and microscopically. Their results in the main confirmed the brilliant work of Sabouraud in Paris, but they differed from him in many details and on a few important points. They discussed four groups of fungi—viz., microsporon Audouini, endothrix, ectothrix, and lastly, some rare forms of fungi giving rise to ringworm-like lesions, but yielding faviform cultures. The microsporon caused about 90 per cent. of scalp ringworm in London and was sometimes associated with some macules on the face, neck, &c., but only exceptionally formed circinations. It was almost entirely confined to the human being. The well-known uniform clinical macroscopical appearances were then described. Microscopically they were characterised by a closely adherent external sheath of *small* spores extending some distance beyond the mouth of the follicle and by an infiltration of the hair shaft with mycelium mostly with scanty septa, and ending above the bulb in a striking fringe. The macroscopical appearances of the cultures were demonstrated and shown to be distinctive. The true fructification was then described as obtained by Dr. Fox and Dr. Blaxall from Klatsch specimens of the aerial portion of the cultures. They found the fructification to be on the same plan in microsporon as in endothrix and ectothrix. Chlamydospores were commonly seen in microsporon cultures. The endothrix fungi were so called from the fact that they were confined exclusively to the inside of the fully infected hair. The

[1] THE LANCET, March 2nd, 1878.

fungus was strikingly larger than microsporon and occurred almost entirely in chains of mycelial spores. Macroscopically they gave rise to two sets of appearances in the scalp. In one division an appearance superficially resembling a form of alopecia areata was produced (*la tondante peladoide*); in another circinations left patches or little collections of a few stumps. In both divisions the hair tended to break off very short or in the follicle and the stumps were dark and swollen. Circinations on the glabrous skin were somewhat more common than in microsporon. It did not cause beard or nail lesions. It was believed to be exclusively human. The striking cultures aptly termed crateriform by Sabouraud were then demonstrated, and the fructification shown to be practically similar to that of microsporon. The ectothrix fungi were a still less homogeneous group, for they included pyogenic fungi, producing markedly inflammatory and pustular lesions both on the scalp, beard, and glabrous skin. All, at any rate those affecting adults, were believed by Sabouraud to be of animal origin—a view Dr. Fox and Dr. Blaxall were in great measure able to confirm. Microscopically the hairs were enveloped in the intra-follicular portion in a sheath of mycelial spores. Mycelia tended to grow out into the follicular epithelial contents. The hair always, they believed, was liable to be invaded by mycelial threads and was sometimes packed. The fructification was shown to be practically on the same plan as in the preceding groups. Fungi giving rise to faviform cultures, but clinically to ringworm-like lesions, were then considered.

Mr. S. G. SHATTOCK showed the Undescended Testes removed from the inguinal canal of a so-called hermaphrodite who had passed for a female. Histologically there was extreme thickening of the basement membrane of the tubules, together with absence of spermatozoa and spermatoblasts. The groups of granular polyhedral "interstitial cells" normally found in the adult testis, and which bear some resemblance to the cortical cells of the supra-renal, were unusually distinct. Mr. Shattock raised the question whether it was not possible that these cells had some connexion with the "internal secretion" of the organ and might not be responsible for virile characteristics. It had been suggested by Schäfer that the interstitial cells of the pancreas had to do with the internal secretion of that gland. The testicular interstitial cells could not be remnants of the Wolffian body for they were absent in the fœtus and the child. Information was particularly wanted from surgeons as to any differences in the effects of castration in children and adults. In operating for the relief of hypertrophy of the prostate surgeons sometimes removed the entire testis and sometimes the vas deferens only; it was important to know whether there was any different result in the two classes of cases as regards the general effect on the patient, as in the latter class the interstitial cells were left. There was possibly a parallelism between the obesity following castration and that of myxœdema, which was certainly due to loss of an internal secretion.—Mr. STANLEY BOYD said that the results of castration appeared to be very inconstant. He mentioned the case of one man with strong sexual powers on whom double castration was performed for extensive tuberculous disease of the testes. Afterwards he was hardly able to speak without bursting into tears. This passed off after some months, and he married, and said that he was competent sexually. In another older man on whom double castration was performed for tuberculous disease hardly any change was noticed except that he became fatter. Similar interstitial cells were also present in the ovary. It had been shown by Beatson and others that retrogression of mammary cancer often occurred after double oöphorectomy, and he suggested that some morbid secretion of these interstitial cells might have favoured the development of the mammary tumour.

Dr. H. MORLEY FLETCHER showed a Congenital Cyst of the Mediastinum removed from a girl, aged six years, who died from bronchitis and whooping-cough. The cyst lay behind the right bronchus and in fibrous connexion with the œsophagus. The wall was composed of unstriped muscular tissue and lined by ciliated epithelium; it was filled with glairy fluid. It was probably a fœtal outgrowth from the œsophagus and not from the bronchus.—Mr. W. G. SPENCER agreed that it was an œsophageal cyst. In the frog the œsophagus remained ciliated after fœtal life.

Dr. WETHERED showed a specimen of Hypertrophy of the lung from a woman, aged fifty-one years, who had been in the Middlesex Hospital under the care of Sir Richard Douglas Powell. There was no history of any illness until five years before coming under observation, when she had an attack of bronchitis followed by pneumonia. About the middle of November, 1896, a cough developed, accompanied by much dyspnœa. On admission the physical signs were those of bronchitis. At the post-mortem examination the base of the right lung was found firmly adherent to the diaphragm and side of the chest wall and was injured in the process. The upper lobe of the right lung was found to be greatly hypertrophied, being equal in size to about three-quarters of the whole of a normal lung. The edges were rounded and thick; the lung substance was firmer and more resilient than normal, and it was evidently a case of true hypertrophy of lung compensatory to the condition of the lower and middle lobes. In the fresh specimen the lower lobe was bright red in colour, slightly aerated, and a small piece cut off floated in water. The middle and lower lobes together only measured about four inches by three inches. These two lobes were entirely devoid of pigment, thus indicating that the collapse had been of long standing, and if not congenital that it had occurred in very early life. No obstruction in the bronchi could anywhere be found. There was no fluid in the pleural sac and no evidence of external pressure on the bronchus. The left lung was emphysematous and altogether larger than natural, there being an increase of true lung tissue. Dr. Wethered was inclined to think that it was the result of a pneumonia in early childhood, basing the supposition on the size of the lobes, the strong adhesions to the diaphragm and wall of the chest, the absence of any indications of obstruction to the bronchi, and the entire absence of pigment.—Mr. J. H. TARGETT agreed that the condition was due to pneumonia in early life.

Dr. LEE DICKINSON showed a specimen of Extensive Thrombosis of the Pulmonary Artery associated with Congenital Pulmonary Stenosis from a boy four years of age. The stenosis began a little below the valve and there was also a deficiency in the septum ventriculorum. There were firm polypoid vegetations almost occluding the pulmonary orifice and the lumen of the artery was nearly occluded by firm, laminated clot extending into the lungs, which contained many infarcts and broncho-pneumonic patches. Usually in these cases the blood clotted badly and possibly the broncho-pneumonia or sub-acute endocarditis was responsible for the undue coagulability in this case.

## CLINICAL SOCIETY OF LONDON.

*Gastro-enterostomy.—Sequel to Cases of Excision of Intestinal Growths.—Voracious Hunger and Thirst after Injury or Disease of Brain.—Fatal Cases of Enteric Fever without Intestinal Ulceration.*

A MEETING of this society was held on Feb. 12th, Dr. BUZZARD, the President, being in the chair.

Mr. J. ERNEST LANE read the notes of Two Cases of Gastro enterostomy for Carcinoma of the Pylorus. The first case was in a woman, fifty-five years of age, admitted into hospital in November, 1894, with all the symptoms of pyloric obstruction. The stomach was united to the commencement of the jejunum by means of Murphy's button and perfect recovery ensued, the patient being alive and perfectly well at the present date and showing no signs of further progress of the disease. A peculiar feature of the case was that the button was still retained in the intestine. The second case was in a man, forty-two years of age, in a state of extreme emaciation from pyloric cancer. Gastro-enterostomy was performed with Murphy's button and the patient's condition was temporarily greatly improved thereby. At nineteen days from the date of operation he developed symptoms of intestinal obstruction, to which he succumbed. The cause of death was found to be volvulus of the sigmoid flexure, but the stomach and jejunum were firmly united, and there was no leakage at the seat of the anastomosis; the button was still in position. In his remarks Mr. Lane advocated the operation of gastro-enterostomy as a palliative measure in cases where the condition of the patient rendered pylorectomy impracticable, and pointed out that in his first case the malignant disease had remained quiescent for a period of more than two years since the operation.—Mr. L. A. BIDWELL said that he had operated in several

cases by Halsted's method, using stitches alone; he preferred simple suture to the use of the button, as it was almost as speedy and less apt to be followed by extravasation.

Mr. WALTER EDMUNDS related the sequel of two previously recorded cases of Excision of Malignant Growth from Large Intestine. The cases were read before the Clinical Society in October, 1893. In the first case a malignant growth in the cæcum was removed by excising the cæcum and establishing an artificial anus. The patient remained in good health for several years, dying from another cause five years and ten months after the operation. There was no recurrence. The large intestine was greatly atrophied and contracted from disease, its diameter being about 1 cm. In the second case, one of excision of a malignant growth in the sigmoid flexure, with re-establishment of the continuity of the bowel, the patient survived the operation three years and three months; the cause of death was probably a recurrence in the lungs.

Mr. STEPHEN PAGET read a paper on cases of Voracious Hunger and Thirst after Injury or Disease of the Brain. He had collected notes of fourteen cases of this kind pointing to the existence of special centres of hunger and thirst close to the centres of speech, probably in the anterior extremity of the temporo-sphenoidal lobe, near the uncinate gyrus. A short account was given of each case, including one in his own practice. The primary injury or disease in each case was as follows: Four of the patients had received a severe blow on the forehead, two had been struck on the side of the head, two had fallen heavily on the back of the head, two had presented signs of a fracture of the base, and one had fallen from a height, coming down in a sitting posture. In addition to these eleven cases of injury there were three cases of disease: one had abscess of the left temporo-sphenoidal lobe, one had a suppurating cyst in the right temporo-sphenoidal lobe, and one had embolism of the left side of the brain. Eight of the fourteen patients suffered from voracious appetite for solid food without much thirst; three suffered both from thirst and hunger; and three had intense thirst without hunger. In none of them was the primary injury or disease fatal; it was, therefore, certain that the centres of hunger and thirst were not situated in the immediate neighbourhood of the vital centres. Three of them had well-marked aphasia; it was, therefore, probable that these centres lay close to the centres of speech, and not improbable that they were connected with the olfactory centre. This hunger and thirst was not the natural appetite of convalescent patients or the result of any general mental derangement, and it was not secondary to traumatic diabetes. With regard to treatment, no harm had come in any case from letting the patient freely indulge his craving for food and drink. The voracious desire lasted, as a rule, for many weeks or months and then came to an end of itself.—Mr. T. SMITH thought that a good case was made out for the existence of a special centre. It could not be a case of exhaustion, as had been suggested, for there was increased activity of function.

Dr. E. W. GOODALL read notes of two cases of Enteric Fever, in which a necropsy showed Absence of the usual Intestinal Lesions. The first case was that of a boy thirteen years of age, admitted into the Eastern Fever Hospital in July, 1894. He died twenty-one days after admission, on the thirty-fourth day of the disease. The chief symptoms were continued pyrexia, a soft and frequent pulse, moderate diarrhœa and abdominal distension, bronchitis, restlessness and delirium, and towards the end muscular tremor, prostration, and coma. Spots were not observed till late in the disease. Post mortem there was slight erosion of the Peyer's patches, which were slate-coloured, but no definite ulceration. The spleen was not enlarged; one parotid gland was suppurating. The second case occurred in 1888, and the account is taken from the hospital records. The patient, a man thirty years of age, died four days after admission on the fifteenth day of his illness. During life there had been numerous rose spots, continuous pyrexia, delirium, and finally coma. At the necropsy the Peyer's patches were much swollen, but not ulcerated. The spleen was enlarged and pulpy. Fagge, Goodhart, Moore, Chantemesse, and Sidney Phillips have related instances of a similar nature.—Dr. SIDNEY PHILLIPS said that on a former occasion he had brought two cases of this description before the society, and had since seen several fatal cases of typhoid fever without intestinal lesions or with only a single very small ulcer.

## BRITISH GYNÆCOLOGICAL SOCIETY.

*Vote of Condolence on the Death of Sir Spencer Wells.—Exhibition of Specimens and Appliances.—President's Address.*

A MEETING of this society was held on Feb. 11th, Mr. MAYO ROBSON, President, being in the chair.

On the motion of Dr. ROBERT BARNES, seconded by Dr. ELDER, a vote of condolence with the family of the late Sir Spencer Wells in their sad bereavement was passed.

Dr. T. BOWREMAN JESSETT showed the following specimens:—(1) A case of Hæmatocele, independent of Gestation; (2) Carcinoma of the body of the Uterus; and (3) Dermoid of the Ovary, with Carcinoma of the Uterus.—Dr. HEYWOOD SMITH thought that the first specimen ought to be further examined with a view to determining whether or not it were due to ectopic gestation. He would ask whether at the necropsy a decidua was found in the uterus.—Dr. PURCELL noted that in the second case no ligature was used, and he could readily understand that there was not much room for such manipulations in a small vagina unless the perineum were split. He saw the operation in the third case; the cyst came down at the same time as the uterus was drawn down; and in this case also clamps were used. He thought that Mr. Jessett could in no way be held responsible for the intestinal obstruction in the first case; certainly there was nothing in the operation at which he was present to determine the fatal result.—Dr. MACNAUGHTON-JONES remarked on the highly ambiguous meaning of the term "pelvic hæmatocele." As commonly used, it was extremely vague and was applied to conditions widely differing in their surgical and anatomical relations. This led to confusion both in diagnosis and treatment. As to the specimen shown by Mr. Jessett he might remark that though ectopic gestation was a frequent cause of pelvic hæmorrhage, the fact that so-called "hæmatocele," due to various causes and in different situations, might occur independently of pregnancy was generally recognised by authorities. Regarding intestinal obstruction after laparotomy he should say there was no more anxious complication nor one more frequently difficult to detect the cause of. The diagnosis between obstruction from septic peritonitis, adhesive peritonitis, appendicitis, ileus, or kink in the bowel, as in Mr. Jessett's case, or strangulation, was difficult, and could only be determined by such symptoms as the mode of onset and time of occurrence, the situation and character of the pain, the shape of the abdomen, and its sensitiveness.—Dr. CLEMENT GODSON said that the second case was a patient from whom he had removed a polypus fourteen or fifteen years ago. She remained well till eighteen months ago and then came complaining of hæmorrhage, but no pain. She thought it was a return of the periods, but the regularity was doubtful, and her age made him suspicious; and when a little later she had an offensive discharge he had little doubt that she had malignant disease. The uterus was slightly enlarged, but mobile. She made a good recovery.—Mr. BOWREMAN JESSETT, in reply, said that no microscopic examination was made in the first case, but there was no decidua in the uterus. He felt sure that the connexion of hæmatocele with ectopic gestation was not nearly so frequent as they had lately been led to suppose. Referring to Dr. Purcell's remarks he thought that the splitting of the perineum should always be avoided if possible.

Dr. MACNAUGHTON-JONES showed a section from an Endotheliomatous Ovary, prepared by Dr. Ludwig Pick, and also a section of a Fallopian Tube which he had seen removed from a patient for Salpingitis, and stained and mounted within twelve minutes after its removal by this pathologist's method.

The PRESIDENT delivered his Inaugural Address.

Dr. C. H. F. ROUTH moved that a hearty vote of thanks be given to the President for his interesting address, and that he allow it to be printed in the journal of the society. He said he had heard many learned discourses, but had not heard one marked by more sterling common sense. He could remember the time when Professors knew less of Gynæcology than the tyro of to day; but the advances in this branch must not lead them to neglect medicine and surgery; those who had the best knowledge of these branches became the best gynæcologists, whilst their neglect led to extremes in gynæcology, such as not operating at all, or operating too

much.—Dr. CLEMENT GODSON seconded the motion, which was carried by acclamation.—The PRESIDENT briefly replied.

Dr. MACNAUGHTON JONES, by special request, showed some Gynæcological Instruments and Appliances which he had recently seen used in the Frauenkliniks in Berlin, more particularly those necessary for Martin's colpotomy and Landau's vaginal pan-hysterectomy. Having briefly described the steps of these operations he showed the instruments and appliances used in each, including Orthmann's instrument, a combination of uterine sound with claw forceps, which in the former operation was used to steady and draw down the uterus. It was also of great value in other operative procedures on the uterus and adnexa. Landau's operation, in which clamps alone were used, had now been performed some 400 times, with a mortality of little over 2 per cent. He claimed for it that it could be performed in cases in which any other form of hysterectomy would be impossible. Dr. Macnaughton-Jones also showed Landau's combination of branched dilator with trocar and cannula, most convenient for opening pelvic abscesses, and the special needles of Olshausen for ligaturing the uterine and ovarian vessels. Besides other appliances, Dr. Macnaughton-Jones also exhibited an electric lamp with a reflector which could be attached to any electrical connexion, and was specially useful in the Trendelenburg position, being capable of throwing a light of 200-candle power into the basin of the pelvis.

## PATHOLOGICAL SOCIETY OF MANCHESTER.

*The Bacteriological Diagnosis of Typhoid Fever.—Exhibition of Specimens.*

A MEETING of this society was held on Feb. 10th, Dr. T. HARRIS, President, being in the chair.

Professor DELÉPINE demonstrated and explained the chief methods which have been used for the Bacteriological Diagnosis of Typhoid Fever from 1894 (when Gaffky established the relations existing between the bacillus and the fever) till 1895. He showed that, up to that latter date, no single test was sufficient to differentiate clearly the bacillus typhosus from the bacillus coli communis of Escherick and allied bacilli. He then gave it as his opinion, based on a number of personal observations, that though the bacillus of typhoid fever was easily obtained from the organs, and especially the spleen, of typhoid patients after death it was difficult to obtain it during the life of a patient unless one had recourse to puncture of the spleen, which he did not consider a justifiable procedure. Pfeiffer's method (1894) of testing the specificity of a bacillus by observing the changes that took place when the bacillus to be tested was introduced into the peritoneal cavity of a guinea-pig protected by preventive inoculation against the action of the specific bacillus in question (or by injecting into a non-protected animal a mixture of the bacillus and of immunised serum) was a great advance. It gave the means of finding out in a comparatively short time, and by a very delicate test, whether a bacillus was the specific one or not. The modification introduced by Metchnikoff, and specially by Bordet (1895), simplified matters still further, since it did away with inoculation of the living animal and showed that the serum of a highly immunised animal was capable of causing immobilisation, agglomeration, and even degeneration of the corresponding bacillus *in vitro*. Gruber and Durham (1896) showed later that this reaction *in vitro* was nearly specific when used with proper care, and gave very good results. Notwithstanding all these improvements the initial difficulty of isolating the bacillus during the life of the patient remained, and the bacteriological diagnosis of typhoid fever could not be effected in less than two or three days (when it was possible to isolate the bacillus). It was also necessary to have the serum of an animal immunised against typhoid fever ready for use when wanted. Widal, who, from his previous work with Chantemesse (1892) had been led to believe that even at an early stage of the fever the blood of typhoid patients acquired immunising properties, thought that instead of using the serum of an immunised animal for the purpose of testing unknown bacilli it would be much simpler to test the blood of patients with a typical typhoid bacillus to see whether that blood was capable of producing in the bacilli the changes described as occurring *in vivo* by Pfeiffer (1894) or *in vitro* by Charrin and Roger (1889), Metchnikoff (1891), Essaeff (1893), Bordet (1895), Gruber and Durham (1896), when bacilli were exposed to the action of the blood serum of immunised animals. He found that the blood of typhoid patients soon after the beginning of the fever (four or five days) was able to produce on pure culture of the typhoid bacilli immobilisation and agglomeration of these microbes. He found also that the blood of patients not affected with typhoid fever and of healthy persons did not give the reaction. He found also that the reaction took place very rapidly. He felt, therefore, justified in announcing on June 26th last year that the method of serum diagnosis of typhoid fever was a very reliable one. Dr. Grünbaum, who was working in Vienna with Professor Gruber, had, it now appears, been working at the same subject at the same time as Widal; he did not, however, obtain results quite as satisfactory and his theses were not published till September—i.e, about two months after Widal had given very clear and circumstantial accounts of his method. Though for these reasons Dr. Grünbaum cannot claim for himself the credit which is attached to Widal's discovery, it is interesting to know that he had been working on nearly the same lines as Widal and had obtained analogous results. In fact, it is remarkable that so few observers should have thought of this application of previous discoveries. Professor Delépine then gave a brief account of the method which he had followed to avoid a number of accidental fallacies in the application of the test, and he alluded to the work which Dr. Sidebotham and himself had done since the beginning of July, 1896. They had now tested about ninety cases, with results which confirm entirely Widal's original announcement. (A first account of these cases has already been published in THE LANCET of Dec. 5th and 12th, 1896.)

The following card specimens were shown:—

Dr. ASHTON: Gynæcological Specimens.

Mr. BATTLE: Foreign Bodies from the Intestine.

Dr. FOTHERGILL: Microscopical Sections and Drawings of Placental Polypus.

Mr. HENDRIDGE: Composite Odontome.

Dr. LEA: (1) Malignant Adenoma of Uterus; and (2) Parovarian Cyst with Twisted Pedicle.

Dr. M'NAUGHT: Entire Ovum retained in Utero after death of Fœtus.

Mr. J. E PLATT: Epulis.

Dr. WAHLTUCH: Skiagraphs.

Dr. R. T. WILLIAMSON: Specimens of Blood from cases of Leucocythæmia.

Dr. YONGE: Nasal Polypus.

## BRADFORD MEDICO-CHIRURGICAL SOCIETY.

*Prevalence of Cancer.*

A MEETING of the above society was held on Feb. 3rd, the President, Mr. GODFREY CARTER, being in the chair.

Dr. ARNOLD EVANS read a paper on the Prevalence of Cancer from a statistical point of view. After remarking that by "cancer" was meant malignant disease in the widest sense, Dr. Evans pointed out that the Registrar-General's report showed that the total number of deaths from cancer in England and Wales during the year 1894 amounted to 21,422, as compared with 11,300 in 1875; that the death-rate per million of the population had risen from 384 in the decennium 1861–70 to 589 in the ten-yearly period 1881–90, and that the increase had been steadily progressive from year to year. He also pointed out that as the local variation in the death rate from all causes required correction for age and sex constitution of the population, so the same correction should be made in respect of cancer when comparing the mortality-rate in one district with that in another. Dr. Evans mentioned that when this correction had been applied by the Registrar-General to the recorded cancer mortality-rate in the registration counties, some which had a high crude mortality-rate from cancer found places in the list of those with medium or low corrected cancer death-rates. This point was clearly illustrated by means of coloured charts illustrating the area of high, medium, and low cancer mortality-rates in the registration counties of England and Wales. One point which Dr. Evans thought required further investigation was the curious fact that even after correction of age and sex constitution all the most

populous parts of the kingdom exhibited a low death-rate from cancer. It was noted that the corrected cancer death-rate for males was subject to greater local variation than that for females. The opinion expressed by the reader of the paper was that the prevalence of cancer was on the increase, but that the increase was not so great as is shown in the Registrar-General's reports, the reasons assigned for this opinion being: (1) that the age constitution of the population is not the same as it was twenty years ago, a relatively larger proportion of people now attaining the age at which cancer is most likely to occur; (2) that greater precision in medical diagnosis has taken many diseases from ill-defined groups and placed them under the heading of malignant disease, this opinion being supported by the fact that the increase in the mortality rate is greater in males than in females; and (3) that inquiries by the General Register Office in reference to vaguely specified diseases add something to the list of deaths from cancer which would otherwise have been differently classified.—Dr. RABAGLIATI took a gloomy view of the advantages of surgical interference in cases of cancer and doubted if life were lengthened thereby. He pointed out that there had been great progress of late years in the treatment of fever and phthisis, but that with regard to cancer the death-rate was on the increase. In discussing the etiology of cancer he laid great stress on the kind of food taken.—Dr. HIME criticised Dr. Rabagliati's views as to the causation of cancer, disagreeing *in toto* with regard to the effects of starchy food.—Dr. J. H. BELL discussed cancer as affecting the eye.

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

### SECTION OF MEDICINE.

*A Case of Diabetes Insipidus.*

A MEETING of this section was held on Jan. 29th, Dr. DUFFEY, President, and subsequently Dr. LITTLE, being in the chair.

Mr. BURGESS related a case of Diabetes insipidus occurring in a girl fifteen years of age, whose previous history was good up to two years ago, when the symptoms developed after a febrile attack. As well as could be determined thirst preceded the polyuria. The amount of urine passed was sixteen pints per diem; inosite was absent; and the specific gravity was 1·003. The patient had been under observation for eighteen months, during which time the urine was frequently examined. At no time was albumin or sugar present. During the above period there were no characteristic symptoms of either interstitial nephritis or amyloid kidney. The treatment comprised valerian, antipyrin, belladonna, ergot, and nitric acid. Beyond giving temporary relief drugs were found to be worthless. The reason for bringing forward the subject was to elicit the opinions of the Academy whether drug-treatment was of any avail more than causing temporary improvement, and whether the disease had any tendency to shorten life.

The PRESIDENT said that he believed Mr. Burgess's diagnosis of the case he had brought forward to be quite correct. He (the President) had seen only one or two cases of the disease, which seemed generally to follow some debilitating illness. In Mr. Burgess's case he (the President) thought that what was called gastric fever was the more immediate antecedent of the disease. He would ask in what doses did Mr. Burgess give the valerian. Trousseau, who introduced the use of the drug, used to give very large doses of it—as much as fifteen grains of the powdered root per day. A great number of drugs had been recommended for this disease; and, according to some authorities, antipyrin had been given with good effect.

Dr. FALKINER was aware of a case of diabetes insipidus which had lasted for twenty-six years. As far as he understood the pathology of the disease the rational treatment was by ergot.

Dr. PARSONS said he had only seen two cases of this disease. He saw both cases in Vienna; in each an accident preceded the symptoms.

Dr. DOYLE mentioned the case of a man, thirty years of age, who had been in the habit of taking large quantities of drink of all kinds. He suffered from alcoholic paralysis, had hemiplegia, and developed acute mania. He passed immense quantities of urine of a very low specific gravity. Dr. Doyle gave him small doses of phosphorus, with the result that he got quite well and was now in perfect health.

Mr. S. M. THOMPSON mentioned a case of this disease, occurring in a young woman, which he treated with phosphorus. There had been no lesion as a cause of the occurrence of the disease.

Dr. SHAW mentioned a case, which he had attended, of a child, five or six years of age, who was attacked with the disease in question, the symptoms being intense thirst and excessive passing of urine. This went on for two or three years. He treated the disease with opium. The patient eventually developed meningeal irritation and effusion on the brain.

Dr. J. BARTON stated the case of a policeman—a man of large size—who came to him suffering from polyuria. He had been during all his previous life perfectly healthy and had received no injury whatever, but suddenly he began to be very thirsty and to pass immense quantities of urine. His urine, on examination in Trinity College laboratory, was found to be perfectly free from albumin or sugar. The symptoms had been present for two or three months before he saw the man. He first gave him extract of belladonna, which did him no good. He tried a good many other things and finally gave him pulverised opium, and after having taken it for a fortnight the patient got perfectly well and had had no return of the disease.

Dr. PEACOCKE asked if Mr. Burgess had found anything to be effectual in alleviating the thirst. Phosphoric acid and other things had been recommended, but his (Dr. Peacocke's) experience of them was that they were failures.

Dr. JAMES LITTLE related a case which came under his notice a great many years ago of excessive thirst and excessive secretion of urine. Post mortem the bladder was found to be not much distended, but its walls were immensely thickened. There was no sign whatever of cystitis, but the ureters were nearly as large as the small intestine of a child. There was no "surgical kidney." The disease appeared to have been mechanical, having its origin in an enlarged prostate. Not long ago he (Dr. Little) saw what he considered to be a similar case.

Mr. BURGESS, in replying, said that he hoped to have the girl under observation for a considerable time and to be able to give them further information as to the case.

# Reviews and Notices of Books.

*L'Hygiène Publique de Hongrie. (Public Hygiene in Hungary.)* Budapest: E. Boruth. 1896. (A Közegészség ügye Magyarországban.)

WE have before us an interesting monograph covering sixty-five pages, compiled by order of the Minister of the Interior of Hungary, and published in several languages for the occasion of the millennial celebrations at Budapest of last year. The statistics are based upon a Government Report for 1895, showing the condition of public health in Hungary at the close of the first millennium of Hungary's existence as a State.

The kingdom of St. Stephen has an area of 322,310 kilometres or 124,448 square miles, including Croatia; it is therefore somewhat larger than the United Kingdom. Politically, Hungary proper, exclusive of Croatia, is divided into sixty-three countries, varying in size between 1150 and 126,000 kilometres, containing from 50,000 to 717,000 inhabitants, these again are sub-divided into circuits. There are twenty-six cities endowed with self-government; Budapest, the metropolis, contains about 600,000 inhabitants. The superficial area of Hungary proper is 279,759 kilometres. Public sanitation is regulated by a special law enacted in 1876, constituting a central sanitary board or council in the department of the Ministry of the Interior, its executive being the magistrates, assisted by the police. All branches of sanitation are brought before these tribunals, from which there is no

appeal, unless the fine exceeds 100 florins or twenty days' imprisonment. Analysts are appointed at convenient distances all over the country; the police have the power to confiscate and to destroy all food and drink declared by the experts to be unwholesome, and to demolish buildings, old or new, if declared by proper authority to be unfit for occupation. The supervision of country medical practitioners, pharmacists, and midwives belongs to this department. Adulteration of food and drinks is severely punished. The following are some of the headings of the law cited above, under which the duties of the authorities are enumerated: (1) security of infant life, supervision of infant asylums, school hygiene, contagious and infectious diseases; (2) prisons and houses of detention; (3) ambulances, help to the wounded; (4) medical practice in general—homœopathy has a chair at the university, but otherwise charlatanism is prohibited; (5) general hospitals and asylums for the insane, both public and private; and (6) railway and ship hygiene. From an international point of view the most important section of that law is doubtless that which treats of epidemics and contagious diseases and the measures to be taken concerning them.

Hungary is the sentinel on the high road of the epidemics proceeding from the East, from Turkey, and from Russia. The supervision of this department is entrusted to special sanitary inspectors of experience. Printed instructions on sanitation are disseminated in thousands of copies among the people, showing what preventive measures are necessary in case of an approaching epidemic. Popular instructions are likewise given as to diphtheria, croup, influenza, cerebro-spinal meningitis, tuberculosis, hydrophobia, syphilis, ophthalmia, typhus fever, &c. Antitoxin (diphtheric) is distributed gratis. In the first year of its application 3737 doses were issued. The decisions of the Dresden Conference have been accepted by the Hungarian Parliament in 1894.

In the Pasteur Institute at Budapest 466 cases were treated in the two years, 1890 and 1891. Many of them came from abroad, where at that time no such establishments were known. In 1892, 144; in 1893, 147; in 1894, 238; and in 1895, 1204 cases were inoculated. The percentage of mortality of the treated was 2·10; but if we exclude cases in which hydrophobia developed during treatment or within twenty-four hours after completing the course of inoculations it amounted only to 1·10.

Purulent ophthalmia was and is still very prevalent in some parts of the country. Special enactments were set on foot, and special measures were taken to prevent its spread in the army, public and private schools, and institutions. A report is submitted by Government and the Parliament on cases of trachoma every year.

Vaccination is compulsory and so is re-vaccination in accordance with the law of 1887. There are public vaccinators appointed and pure lymph is distributed at certain stations. All pharmacies are licensed by Government and must be presided over by graduates of the university. They are considered as parts of public hygiene and not as trade establishments. The Supreme Sanitary Board at Budapest is merely a consultative body and consists of a president appointed by the Crown, a vice-president, and a secretary, besides twelve ordinary members. It gives advice in all matters of public health, recommends candidates for medical appointments, &c.

The percentage of persons suffering from zymotic diseases on the whole population of about 15 000,000 was: in 1893, 7·70; in 1894, 10·2; in 1895, 9·9. The most fatal diseases were: diphtheria, croup, measles, typhoid fever, and scarlet fever. The mortality from small-pox shows the following numbers: there died, of the vaccinated, 37·3; of the non-vaccinated, 62·7. The death-rate was, among the protected, 11·5; among the unprotected, 47·7. This high rate of mortality prevailed before the more stringent sanitary law of 1887 came into operation. Between the years 1879 and 1887 the mortality from small-pox was appalling; there occurred—particularly in the year 1887—15,470 deaths; but since vaccination has been more carefully practised there were, in 1892, 3424; in 1893, 1224; in 1894, 837 fatal cases of variola—a great improvement. But whilst deaths from small-pox are diminishing there is an alarming increase of mortality from tuberculosis; its percentage between the years 1892 and 1895 was progressive, and rose respectively from 9·29, to 10·29, 10·60, and 12·01 of the whole annual mortality.

Puerperal fever is carrying off many more victims than would have been expected in the country of Semmelweis. There is on an average a midwife for every 2043 inhabitants in the country places and one for every 788 in the towns; but there is an unequal distribution of educated midwives, since in 9384 villages, having nearly 6 000,000 inhabitants, there was not a single recognised midwife to be found. The number of beds in hospitals and asylums, both public and private, amounts to over 15,000. There are, besides, permanent emergency hospitals in 2326 towns and communes capable of supplying 13,224 beds in case of an epidemic outbreak and for isolation purposes. Prostitution is under police supervision.

The following was the general mortality per 1000 of the population: in 1890, 32·5; in 1891, 33·4; in 1892, 32·7; in 1893, 30·1; in 1894, 30·2; and in 1895, 29·4—a slow but gradual improvement.

The first real organiser of matters concerning sanitation was the late Dr. Markusovsky, under Minister Trefort. The actual president of the central sanitary board or council is Dr. Chyzer, who has for co-adjutors men of great zeal and superior attainments. Among the juniors we notice the name of Dr. Jenö Farkas, well known in medical circles in London.

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*Ectopic Pregnancy; its Etiology, Classification, Embryology, Diagnosis, and Treatment.* By J. CLARENCE WEBSTER, B.A., M.D., F.R.C.P. Edin., Assistant to the Professor of Midwifery and Diseases of Women and Children in the University of Edinburgh. With eighty illustrations of naked eye and microscopic appearances. Edinburgh and London: Young J. Pentland. 1895.

ALTHOUGH, as the author says in the introduction, the importance of the subject might be considered a sufficient justification for publishing a work embodying the recent advances made in the knowledge of the nature and treatment of this condition, a still more weighty argument is afforded by the plea that he brings forward for consideration a large body of original matter based on several years of clinical and laboratory work. There is an interesting account of the early history of the subject sub-divided as follows: (1) the history of ectopic pregnancy in the period before Dezeimeris; (2) that of the period between Dezeimeris and Lawson Tait; and (3) that of the present time. The first case of ectopic pregnancy of which there is any clear account, is one described by Albucasis, an Arabian physician, living in Spain in the eleventh century. It is not stated here whether the case ended fatally or not, but as in this case parts of the fœtus were discharged through the abdominal wall by suppuration, recovery was not unlikely.

In discussing the changes that take place in the Fallopian tube when pregnancy occurs there Dr. Webster considers it to be fully established that a decidua vera is always formed in the tube. As regards the value of anæsthesia in facilitating the examination necessary for a diagnosis of ectopic gestation the author says: "The danger of post-anæsthetic rupture of the sac from vomiting has been exaggerated by some authors in a most unwarranted

manner." It appears to us that the danger in such cases is not due to the occurrence of vomiting. Rupture is much more likely to be caused by the bi-manual examination, unless very cautiously employed.

The anatomical and historical parts of the book strike us as being the most satisfactory; the clinical portion deals with matter that has already received considerable attention at the hands of other authors. There are no less than twenty-two excellent plates at the end of the volume from drawings made by the author. The book must undoubtedly be regarded as a valuable work of reference on ectopic pregnancy.

## JOURNALS AND REVIEWS.

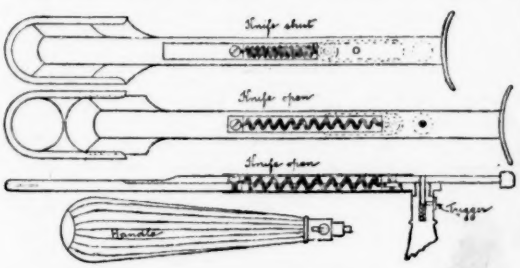
*St. Thomas's Hospital Gazette.*—St. Thomas's men will notice with regret the announcement in the first number of Vol. VII. of the retirement of Mr. F. G. Parsons, who has so ably edited the *Gazette* from its earliest infancy. Among the articles is a succinctly-written little paper entitled "Notes on the Application of x rays" and the first instalment of a paper by Mr. W. G. Sutcliffe, "Recollections of the Second Matabele War."

*Guy's Hospital Gazette.*—The recent death of Surgeon-Major Manser, who lost his life at the post of duty, is fresh in the minds of all, and the two letters from Surgeon-Lieutenant-Colonel J. S. Wilkins and Dr. L. F. Childe respectively, announcing the death and appreciating the worth of the late officer will be read with interest. R. O. M. continues his "Notes from a Holiday in Persia." From them we learn that the only hospital in Teheran is under the charge of an American and that in the matter of surgical machinery it is quite up to date—"all the latest from New York."

# New Inventions.

## AN AUTOMATIC SPRING TONSIL GUILLOTINE.

I WISH to draw the attention of the profession to a form of tonsil guillotine which I have devised to work by "spring action." Owing to the fact that there are numerous forms of guillotine already in use, one naturally hesitates before describing any modification of such an instrument. However, I venture to show the working of one which, with the advice and kind assistance of Mr. C. Vyle, I have had made by Messrs. Arnold and Sons, West Smithfield, and it appears to me to be of some advantage. The accompanying illustrations show at a glance the method I have adopted of applying a "spring" to a Mackenzie instrument. One end of




the spring is fitted to the distal part of the lower segment, and is the fixed point, and the other to the knife slide. On setting the instrument in the usual way, by drawing back the proximal end, the spring is thus made tense, and is fixed and kept ready to be instantly released, by a catch within the handle meeting a small hole in the top slide as it is drawn back, and worked by a smaller spring in the handle. When ready to excise the tonsils, the guillotine is released simply by touching a knob or trigger, as seen in the diagram. The spring is covered in and so arranged that it can easily be removed for cleansing purposes, and the strength is sufficiently great to enable the knife, on being released, to instantaneously cut through the tissue. The advantages are: rapidity of action; can be worked with one hand, leaving the other free for the thumb to press externally upon the tonsil, the left for the left and *vice versâ*; the easy and simple mode of working; the instrument cannot get out of order; is simple in its mechanism and seems to answer the purpose for which it is intended — namely, immediate excision when once the guillotine is favourably *in situ*, and being thus steady and not requiring any force from the operator, so preventing any movement or displacement from the tonsil otherwise necessarily induced.

London. R. BROOKS POPHAM.

## AN IMPROVED TONSILLOTOME.

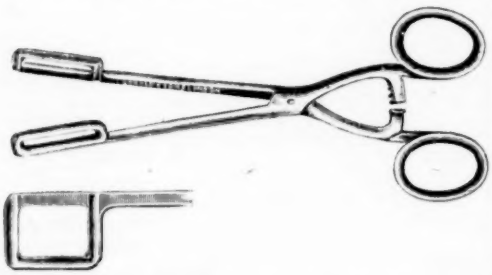
THIS instrument does away with the necessity of an assistant to push up the tonsils. It works by a spring. Before use the blade is drawn back until retained by the catch, and the small pin inserted into the hole in the shaft. The instrument is introduced into the mouth horizontally until nearly in position, and then turned sideways over the tonsil, while the operator pushes it up with the thumb of the other hand. During the last movement the pin falls out, and on pulling the trigger the tonsil is removed instantaneously, painlessly, and with great precision. A specially devised guard is added to prevent the tonsil falling down the patient's throat. Messrs. Mayer and Meltzer of 71, Great Portland-street, W., are the makers.

FREDERICK SPICER, M.D. Durh.
Devonshire-street, Portland-place, W.

## A NEW TONSIL FORCEPS.

SOME time ago, having to excise a number of enlarged tonsils, I found great inconvenience in working with the instruments commonly used for that purpose. Accordingly, I designed the instrument illustrated below, which has been most satisfactorily made by Messrs. Arnold and Sons, London. The mode of using the instrument is as follows. The forceps having been introduced into the mouth and counter-pressure made beneath the angle of the jaw, the enlarged tonsil is thereby placed between the blades of the forceps. The handles then being approximated, the instrument is locked by means of the neck and catch with which it is furnished. The tonsil is then drawn well towards the middle line by means of the instrument. A tonsil bistoury is then passed from below upwards behind the tonsil about to be removed. The bistoury is made to cut from behind forwards, being kept closely applied and parallel to the sides

of the grasping portion of the forceps. For those who would wish to make "assurance doubly sure" the bistoury can be inserted within the fenestræ and made to remove that portion of the tonsil contained within the blades, which, inasmuch as the fenestræ are fairly large, practically means the entire gland. The latter mode of operating will be



facilitated by studying the portion of the tonsil enclosed between the blades by inserting a small tumour-hook in it. This method of removal cannot be effected without some detriment to the edge of the bistoury. The advantages claimed for this instrument are as follows: (1) impossibility of wounding the internal carotid artery, as the blades of the forceps clasp the gland in a plane at right angles to the line of the artery; (2) extreme ease of application, as both blades are in full view of the operator; (3) when applied is retained in position by catch, thus enabling the operator to dispense with assistance; (4) can be applied to either side with equal facility; and (5) the grooves on the blades of the forceps obviate any tendency on the part of the tonsil to slip from the grasp of the instrument.

Littleborough. G. KIRKMAN FINLAY, M.B., B.Ch., B.A.O.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Feb. 11th, the President, Sir WILLIAM MAC CORMAC, being in the chair.

The secretary reported the death, on Jan. 31st, 1897, of Sir Thomas Spencer Wells, Bart., past President and past member of the Council of the College.

The Council passed a resolution of condolence.

The report from the committee on the circular to the Fellows was received and adopted. It showed that 1150 circulars were sent out and 686 valid answers were received. Of these answers 485 negatived the proposal to give direct representation upon the Council to Members of the College. Of the minority of 201, who thought that the Members should be admitted to the privilege, 42 thought the representation should be by Members only, 40 by Fellows only, and 119 were indifferent. Only 67 thought that Members should be qualified to vote irrespectively of their standing in the profession, 125 voting for some age restriction and 9 not replying to the question; 129 considered that new seats should be added to the Council, 49 that seats should be taken from the Fellows and given to the Members' representatives, and 23 ignored the point.

A report was presented from the delegates of the two Royal Colleges on the question of a Teaching University for London and the following resolution recommended by them was adopted:—

"That the Royal College of Physicians of London and the Royal College of Surgeons of England, in full accord with their previous action, express the earnest desire that Her Majesty's Government will at the earliest opportunity re-introduce a Bill for the reconstitution of the London University by Statutory Commission on the general lines of the report of the Cowper Commission, and do assure the Government that such a course will have their approval and support."

Mr. W. Rivington resigned his position as one of the delegates.

A letter was read from Dr. Michael Beverley stating that at a largely-attended meeting of the profession resident in Norwich and at a very numerously attended meeting of the Norfolk and Norwich Medico-Chirurgical Society, Sir Frederic Bateman and he were appointed a deputation to present a Memorial to the College asking for advice with regard to professional relations with medical aid associations.

A committee was appointed to receive the deputation and to report on the whole matter to the Council.

A letter was read from Lord Lister thanking the Council and the Fellows for their congratulations.

The Council approved, as proposed by the Royal College of Physicians of London, the inclusion of bacteriology as a subject of study and examination under the regulations of the combined Examining Board, and the addition for this purpose of the words "and in bacteriology" to Section 1, Sub-section 5, par *d* of the regulations.

It was moved by Mr. Macnamara and carried *nem. con.*—

That the Council do hereby withdraw their representatives from the Civil Rights Defence Committee acting on behalf of Mr. R. B. Anderson, F.R.C.S. Eng.

It was moved by Mr. Heath and carried—

That the resolution of the Council of Dec. 21st, 1893, relating to the appointment of Representatives of this College on the Conjoint Finance Committee be rescinded and that the treasurers of the College be *ex-officio* Members of such Committee.

## CONGRATULATIONS TO LORD LISTER.

WE have received the following letters for publication from the President of the Royal College of Surgeons of Edinburgh:—

Royal College of Surgeons of Edinburgh,
3rd February, 1897.

DEAR LORD LISTER,—I have the pleasure of transmitting to you the congratulations of the Fellows of the College on the occasion of the further honour conferred on you by the Crown in your elevation to the Peerage, passed with acclamation at the meeting of the College to-day.

I am, Dear Lord Lister, yours very sincerely,
JOHN STRUTHERS.

TO LORD LISTER,—We, the Fellows of the Royal College of Surgeons of Edinburgh, met to-day for the first time since Her Majesty conferred on you the honour of elevation to the Peerage, embrace the opportunity of offering you our congratulations on an honour so well deserved and which is enhanced by the fact that it is the first occasion on which that honour has been conferred on a member of the medical profession.

It is with pleasure that we, some of us your former colleagues, many of us your former students, recall that you became a Fellow of the College in 1855, that your career as a Teacher, and those Researches that were to bear so much fruit, began in Edinburgh; and, after being continued for some time in Glasgow University, were resumed in Edinburgh, where, in the position of Professor of Clinical Surgery, you inculcated the principles of Antiseptic Surgery to large classes of students and illustrated these principles by your practice in the Royal Infirmary.

While the results of your labours are appreciated by all of us, it is only those of us who recollect what Surgery was before you enforced these principles who can fully realise the improvements that have been effected by their application. What were dangerous operations are now done with comparative safety, operations that could not be attempted are now undertaken with success, and wounds of all kinds now heal rapidly and cleanly. Further, we recognise that the benefits of the application of antiseptic principles extend beyond surgery; that the mortality in Maternity Hospitals has thus been very greatly reduced, and that antiseptics are employed with advantage in many departments of the Practice of Medicine, including that of the regulations for Public Health. We need hardly add that these principles are fully applied in our Royal Infirmary and other Hospitals here, and everywhere in Edinburgh.

It is a source of pleasure to us to think that the new era in surgery which you have established will render your name imperishable as one of the benefactors of the human race. All of us, former colleagues and pupils alike, join in further expressing our esteem for you personally, and in wishing you yet many years during which you may enjoy the satisfaction of knowing that your great work is appreciated throughout the world and during which you may still more exert your influence.

In name and by authority of the College,
JOHN STRUTHERS, President.

[REPLY]

12, Park-crescent, Portland-place,
6th Feb., 1897.

MY DEAR PRESIDENT,—I beg you to express to the Fellows my warmest thanks for their generous words of congratulation transmitted by you. They carry me back to the days when I began to teach Surgery with the sanction of the College, entailing, as it did, that of the University; a most liberal arrangement, then, I believe, unique in the British Island, one which has certainly contributed largely to the greatness of the Edinburgh school, and to which I am personally incalculably indebted.

I need hardly say that this expression of kind feeling on the part of my former colleagues and students has given me the greatest pleasure.

Believe me, very sincerely yours,
JOSEPH LISTER.

# THE LANCET.

*LONDON: SATURDAY, FEBRUARY 20, 1897.*


THE House of Commons last week, when it went into Committee of Supply to resume the debate on the army estimates, was the scene of an interesting and lively discussion which was followed by an unexpected result. It was generally believed that the Government proposals were unsatisfactory to many of their own followers and would meet with strong opposition, especially on the part of the military members and the advocates of radical reforms in the Army and War Office. The debate was one of the few occasions, however, in which a speech told with considerable effect on the House, and, to adopt a frequently-applied phrase, took the wind out of the sails of the Opposition. Mr. BRODRICK defended the Government measures in a speech of singular clearness and ability. It does not, of course, fall within our province to pronounce any opinion upon the wisdom, efficiency, or otherwise of measures of military policy and army organisation in so far as they do not affect the health of the soldier or the medical service, but we may, nevertheless, say that he showed that the Government had, at any rate, considered the situation in all its bearings and had adopted what, under the circumstances, seemed to be the most prudent and practicable course. But what was more to the point, Mr. BRODRICK showed that they had, in what they were doing, the approval of the late, and of the present, Commander-in-Chief. This had the effect of disarming the military members of the House and of depriving the criticism of Sir HENRY CAMPBELL-BANNERMAN of any effective sting.

The part of Mr. BRODRICK'S speech which more directly concerns us, however, was that in which he had to deal, as he said, with the "thorny subject" of the condition of the Army Medical Department. He admitted that for some time past there had been difficulty in procuring sufficient candidates. Many reasons had been adduced for this, among the principal of which, he said, were the questions of rank and social position, of the examinations having been conducted under less favourable circumstances for candidates from Irish and Scotch medical schools, of the rate of pay in India, and of the prolonged foreign service. Lord LANSDOWNE had given, Mr. BRODRICK declared, the most careful personal attention to all these questions, had received various deputations, and had spared no pains to get to the root of the difficulty. Lord LANSDOWNE was, moreover, very anxious that every consideration should be shown to the officers of a most valuable and distinguished department. As regards the constitution of the examining board for the army, we have Mr. BRODRICK'S assurance that, while every consideration would be given to eminent members of the Scotch and Irish schools for filling vacancies on the examining board, the board would be constituted solely with reference to the professional eminence of its members, without regard to the mere fact of their coming from one part or another of the United Kingdom. We confess that we have never considered this was a matter that had much, if anything, to do with the popularity or otherwise of the medical service, or that candidates were deterred from presenting themselves for examination on this ground; and the fact that the falling off of Irish candidates is no greater than the falling off of other candidates deprives it, as Mr. BRODRICK rightly alleged, of any special significance or importance. Mr. BRODRICK then briefly passed in review the history of the department in connexion with the question of the titles of medical officers and that lack of social consideration with which it was closely bound up. He traced the origin of this to the abolition of the regimental system and the consequent loss of that special and close personal contact and intimate relationship that existed between medical officers and their regimental brother officers. There is, no doubt, a good deal of force and truth in this view; but we would remark that the regimental system was abandoned in the interest of the State, and it should be remembered that there was even then a good deal of discontent expressed by many regimental medical officers at their position at mess, considering their relative rank and the amount of their contributions to the mess and band fund. What is now apt to be forgotten, however, must be admitted by everybody, and it is this: that since the introduction of the present system the gain in regard to medical and field hospital organisation, field hygiene, and medical arrangements generally has been enormous. The splendid results, as far as the sick and wounded are concerned, that have been obtained in many of our late campaigns under the present consolidated system could not have been accomplished under the older regimental one. But all this is now ancient history; we have to address ourselves to the state of things as they exist at the present time. We are glad to recognise that Lord LANSDOWNE has done his best to remove several real and substantial grievances of which, as we have always contended, medical officers had to complain. He has, we are told, after communication with the India Office, secured to them an increase of pay in India and the Indian tour has been moved back to five years instead of six. By the increase of pay we trust we are right in assuming that the medical officer will get the pay of his army rank whilst serving in that country. Assistance is also promised towards forming medical messes at large stations and in providing the necessary accommodation for them where possible; and opportunities to study on return from foreign service will likewise be afforded. We are not told, however, whether the period of home service will be increased and that of foreign service consequently decreased—a very important consideration; nor are we told whether medical officers will be moved about when at home less than they are at present.

But it is when we come towards the end of Mr. BRODRICK'S remarks on the Medical Department that the real difficulty has to be encountered. It is many years since we first suggested that the medical service should be made into a Royal Corps and placed on a footing analogous to that of the other scientific corps of the army. The medical service is a departmental one, and

its officers have at present composite medical and military titles carrying substantive rank in all that appertains to their own service and duties. These concessions, Mr. BRODRICK says, made in deference to the recommendations of the late Sir ANDREW CLARK, though welcomed at the time by the profession, have not altogether acted as was desired. Some of the composite titles, we would parenthetically remark, were very unhappily chosen. What medical officers ask for is that they should be formed into a corps and welded with the Army Hospital Corps under some such title as the Royal Medical Staff Corps or the Royal Corps of Surgeons, of which they should be the officers with corresponding military, and not composite, titles. They will consequently be disappointed to learn that none of the proposals which have been submitted to the Secretary of State for giving new forms of army rank to the medical staff appear to him desirable for adoption. He does not believe that by such titles the Medical Department will obtain the status to which their talents and professional acquirements entitle them, and says that anxious though the War Office is to meet the medical profession on all points this is not one of those on which further action appears to be desirable.

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THE adverse conditions under which the poll of the Fellows of the Royal College of Surgeons of England on the question of the direct representation of the Members of the College on the Council was taken have produced their natural result. By 485 votes to 201, a majority of 284—considerably more than two to one—the Fellows of the College have reversed the decision arrived at by the half-yearly meeting of the Fellows in January, 1896, and have decided that "it is not desirable to give the Members of the College direct representation upon the Council." In the face of this vote the analysis of the 201 affirmative answers which forms part of the report of "the Committee on the Circular to the Fellows," and shows how those favourable to the representation of the Members would carry their views into effect, loses much of its intrinsic interest. Nevertheless, there are some noteworthy points in this analysis. The first point is that out of the 201 affirmative voters no less than 161 would admit Members of the College to seats on the Council, and 42 of these are in favour of the representation of Members being by Members only. Only 40, therefore, of the 201 affirmative voters were in favour of the representation of Members being by Fellows only, and 119 were for the representation being by Fellows and Members indifferently. This shows a remarkable growth of liberality of opinion among the liberal-minded Fellows. On the other hand, among the 201 affirmative voters there is a stong preponderence of opinion in favour of limiting the concession of the franchise to Members of a certain standing, 67 voting that Members of the College should be qualified to vote without restriction as to standing and 125 imposing a limit of years. As to the seats to be assigned for the representation of the Members, the committee states that the numbers mentioned were too varied for convenient classification, ranging from two to half the Council, 129 being in favour of obtaining the seats by addition and 49 by subtraction. The chief reason for the preference given by the 49 voters to obtaining the seats by subtraction was no doubt the belief that a Council of 24 is quite large enough.

We are neither surprised nor discouraged by the result of the poll. We are not surprised because we carefully pointed out at the time that the circular of the Council was issued that the conditions under which it had gone out would injuriously affect the prospects of a successful issue for the Members of the College. We may remind our readers that the adverse conditions were these: In the first place the subject of the representation of the Members of the College on the Council had been discussed by the Council, and the Council, by 11 votes to 8, passed a resolution to the effect that as the Council represented the Members of the College as well as the Fellows no further representation of the Members was desirable. When this vote was taken the minority was weakened by the absence of two or three members of the Council favourable to the concession. In the second place, the circular itself was so drawn as to show a decided leaning to the negative side. This was chiefly due to the action of the Society of Members of the College in urging upon the Council to incorporate in the circular the reasons of the society for asking for representation, such reasons being by no means the strongest or least assailable reasons that could have been formulated. The request destroyed the prospect of securing the issue of a circular of a neutral tint, as the committee on the circular to the Fellows doubtless considered themselves bound to answer and to correct the statements of the Society of Members. The third and, we think, the most potent adverse influence was the issue, at the precise moment when the circular of the Council was being sent to the Fellows, of another circular from the Society of Fellows of Manchester, accompanied by a reprint of an article or letter which a member of the Council of the College had published in the medical journals some weeks previously, expressing views strongly antagonistic to the claims of the Members of the College.

Nothing is more encouraging to us than the fact that in spite of the adverse influences on which we have commented the opponents of the concession fall short by nearly 100 votes of a majority of the Fellows. This circumstance is of the greatest importance to the cause of progress, for the material is already at hand by which a minority on the present poll can be converted into a majority at the next. For the time the result stops progress both for the Fellows and the Members of the College and prevents the Fellows securing a new Charter to make statutory the half-yearly meetings of the Fellows of the College. But it cannot stop the progress of opinion among Councillors, the Fellows and the Members of the College, and the profession generally. It cannot prevent the gradual disappearance of the majority of 284 until the requisite affirmatory majority is obtained. The growth of liberal opinion in the profession may be slow, but it is sure, and will not be hindered by the fact that exclusive privilege dies hard.

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IN the dental profession at the present time there seems to be quite an epidemic of prosecutions, the majority of which are in connexion with Clause 3 of the Dentists Act—namely, the one dealing with unregistered persons. At

Brighton no less than seven such summonses have been heard within the last few weeks, while at Swansea there have been five similar cases. The Dentists Act, as amended by the Medical Act of 1886, allows private individuals to carry out prosecutions, but those who undertake such work should make certain of their facts beforehand and not leave any stone unturned to ensure success, as a single failure is a heavy discount on many successes. That this care is not always taken is well shown by two prosecutions during 1896, in one the action being lost by the technical error of not putting in the Dentists' Register as evidence, while in the other the person prosecuted was actually on the Dentists' Register.

With regard to the actions at Brighton we find that in the three heard on Jan. 19th one was adjourned and two were unsuccessful. In the first of these it was admitted that the name of the defendant did not appear upon the Dentists' Register, and the defence was that although such was the case the defendant had practised dentistry for twenty-two years and was therefore in practice before the passing of the Act. After hearing the evidence the stipendiary adjourned the case for eight weeks on the ground that an action is to come before the High Court in which a number of dentists, including the defendant, are proceeding against the General Medical Council for refusing to place their names on the Dentists' Register under Clause 37 of the Dentists Act. This case is one of the greatest importance, and its result must have an important bearing upon the judicial position of the General Medical Council in the administration of the Medical and Dental Acts. In the second case the person who appeared to answer the summons was not the same seen by the witnesses for the prosecution, and as the solicitor for the plaintiff did not press the case the summons was dismissed with costs. The third case was against a Dr. DINJIAN, manager of the American Dental Institute, who was admittedly not registered. The stipendiary dismissed the case on the ground that sufficient evidence had not been produced to prove that defendant held himself out as a qualified dentist. This idea is somewhat difficult to fall in with when the defendant admits to being the manager of the Brighton branch of the American Dental Institute. The four cases heard on Jan 26th, in addition to one heard at Hove, were all successful. Of the cases at Swansea the summonses have been dismissed in two, while in the remaining three no judgment has so far been given.

In another case which has recently been before the courts the interest centred on the question of damages for malpraxis. The plaintiff, to state the case briefly, sued the American Dental Institute on the ground of alleged negligence on the part of one of their operators in attending to him. The plaintiff had, as far as can be gathered from the newspaper report, a bridge made; for this he paid sixty guineas. He subsequently suffered much pain and discomfort, due to the roots to which the bridge was fastened being left untreated and in a septic condition. The plaintiff was eventually seen by a Dr. BOSWELL, who seems to have given him relief. Evidence in favour of the plaintiff was given by some prominent dental surgeons, and he was at the conclusion of the hearing awarded £150 damages. As far as the question of malpraxis goes the case was of undoubted interest, and although we are unable to discuss now the whole question in detail it is well to point out that the name of M'CORMICK does not appear in the Dentists' Register for 1896. This fact should not, we think, be lost sight of by the proper authorities. The action is a glaring example of the insufficient way in which the public are protected from the hands of unqualified persons.

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THE question of the registration of midwives bids fair to become as hardy an annual as that affecting the deceased wife's sister. A new Bill has been introduced and backed by twelve Members of the House of Commons, which Bill was down for second reading upon Feb. 12th, although it never arrived at that stage of progress. Of this Bill, which is shorter and less complex than that introduced by Lord BALFOUR of Burleigh in the House of Lords in 1895, we print the full text in another column, so that our readers can study its provisions at leisure for themselves. In some ways it is an improvement upon its predecessor; for instance, Lord BALFOUR'S Bill defined "midwife" as a woman who undertakes to attend cases of natural labour without the direct supervision of a medical practitioner. The Bill now before the House wisely avoids this pitfall by defining "midwife" as a woman who undertakes to attend cases of labour in accordance with the regulations to be laid down under this Act. Thus it avoids defining the impossible by omitting the words "natural labour" and shifts the responsibility to the shoulders of the hereinafter to be constituted Midwives Board (*vide* Clause 5). The local supervising authority is by both Bills practically the same—namely, the local sanitary authority; but Lord BALFOUR'S Bill provided for payment for this supervisory duty, whereas the present Bill makes no such arrangement, unless Clause 6 may be taken to include a provision of this kind.

We think it most unlikely in the present state of public business that this Bill will ever reach its second reading, and we understand that Sir WALTER FOSTER intends to move its rejection; but nevertheless it is of importance that the profession should grasp the main facts of the Bill, so as to have rational grounds either for opposing or furthering the measure. It is, we believe, universally allowed that the present system, whereby any woman, however ignorant, may attend women in childbed without let or hindrance, without there being any check on her spreading puerperal fever, and without being under any kind of authority, is intolerable and should be altered; but when it comes to laying down the details of a measure whereby the present state of matters may be improved the difficulties in the way begin to appear. We must remember that midwives always have existed and always will exist; that women, especially among the poorer classes of the community, will continue to prefer to be attended by a midwife in preference to a medical man, possibly on account of cheapness, but in many cases, we expect, because the midwife does not lay down so many (to their minds) unnecessary and harassing rules for their guidance during convalescence; that this partiality, though it may appear to well-regulated minds very foolish, is a factor which must

be reckoned with in dealing with this question; and that unless the Legislature is prepared to absolutely prohibit all and every kind of unqualified practice midwives will continue to be an integral part of the social community. At present the midwife is a sort of free-lance, but as a result of all the registration Bills hitherto brought in she would come to be recognised, despite all said to the contrary, as a duly licensed medical practitioner.

Although we yield to no one in our desire that puerperal women should be protected from the dangers of sepsis brought about by the ignorance or carelessness of their attendants, yet we cannot agree to any scheme which does not lay down a hard-and-fast line between a midwife and a medical practitioner. The present Bill in Clause 5 lays all the responsibility of defining the duties of midwives upon the Midwives Board. Paragraph *f* of Section 2 of this clause is as follows: "To frame for approval by the General Medical Council rules for regulating, supervising, and restricting within due limits the practice of midwives." We must confess ourselves unable to see how the General Medical Council or any other body is to frame rules which shall lay down for the guidance of a midwife when her own attendance shall cease and it becomes necessary for her to call in a medical man, for we take it that this is meant by the paragraph under consideration. If the Bill ever reaches the committee stage we consider it absolutely necessary that some clause should be added making it clear as to what in the opinion of the framers of the Bill a midwive may or may not do; for as it stands the measure is very incomplete, and too much seems to be left to those who are to arrange the details. All the same it is an honest and carefully-drawn plan to attempt to meet a humanitarian want, and if the points which we have endeavoured to indicate are dealt with we think that, as a part of the law of the land, it would in some ways diminish pain and suffering. At any rate, to quote the great master HIPPOCRATES, if it do no good it will at least do no harm, always provided that it is made perfectly clear not only to those who can read the Bill, but also to that class from which the midwife's patients come, that even when registered the midwife will be in no way a "doctor," but only a nurse. We should like to add that we see no reason why this question should not be discussed in the profession calmly and with politeness. The points are all perfectly clear, and the procedure requires formulating, but there is no necessity for ill-tempered recrimination.

PORTSMOUTH AND GOSPORT.—The total funds contributed towards the restoration of the Royal Portsmouth Hospital as the memorial of Her Majesty's long reign had reached on Feb. 13th £5139. At a meeting at Gosport last week it was decided to establish a Victoria Nursing Institute. An amendment was moved by a working man that 100 workmen's dwellings should be provided instead. Perhaps it is a pity that this was negatived, for workmen's dwellings are greatly needed. Parts of the town much need attention, and long ago the urban council were asked to provide better dwellings for the poorer classes. They, however, decided on Feb. 18th to take no action under the operative section of the Housing of the Working Classes Act, relying on private enterprise and the plea of costliness.

# Annotations.

"Ne quid nimis."

## THE WATER-SUPPLY OF THE METROPOLIS.

WE begin to-day the report of a Commission which we have instituted to inquire into the water-supply of the metropolis—a subject which bids fair to assume a political importance proportional, if possible, to its importance when viewed from the aspect of public health.

## THE FIGURES OF VACCINATION.

AT a meeting of the Royal Statistical Society held on the 16th inst. at the Royal United Service Institution a paper on "English Vaccination and Small-pox Statistics, with special reference to the Report of the Royal Commission and to recent Small-pox Epidemics," by Mr. Noel A. Humphreys, was read. He arrived at the following conclusions (among others) based upon the figures discussed: 1. That the mean annual death-rate from small-pox at all ages in England and Wales, which was 408 per 1,000,000 in the twelve years for which records exist prior to compulsory vaccination, fell to 126 per 1,000,000 in the forty-two years since vaccination was made compulsory, which period included the world-wide epidemic of 1871-72. 2. That the main part of this decline of mortality occurred among children under the age of ten years, who may be presumed to have been principally affected by the increase of infant vaccination. 3. That the age-incidence of fatal small-pox had entirely changed under the influence of increased infant vaccination; and that small-pox, from being mainly a disease of childhood, was now proportionately more fatal to adults. 4. That, judged by the statistics of the last six principal local small-pox epidemics, the proportion of deaths of children bore a constant ratio to the proportion of children officially returned "unaccounted for" as regards successful vaccination. 5. That efficient infant vaccination conferred a practically complete immunity from fatal small-pox during the first ten years of life. 6. That the increase in the proportion of adult deaths from small-pox must be attributed to the waning of the protective effect of infant mortality, this hypothesis being corroborated by the steady increase in the proportional case-mortality of vaccinated persons in recent epidemics at successive age-periods above ten years. 7. That both the small-pox attack-rate and the case-mortality was far lower at all ages among those who had been vaccinated in infancy than among the unvaccinated. 8. That the type of disease suffered by small-pox patients was far more severe among the unvaccinated than among the vaccinated; and that the severity of the type appeared to vary with the number and quality of the vaccination marks. 9. That, judged by the statistics of small-pox hospital nurses and attendants, successful re-vaccination afforded practically complete protection to adults, even to those brought into actual personal contact with the worst forms of disease. We recommend these conclusions to the careful consideration of those who have been unable to read aright the lessons taught by figures.

## THE "LOCAL PRACTITIONER": A PRESS PARODY.

IT is a most satisfactory sign of the spirit of our times that the interests of hospitals, which have done and are doing so much for the public good and for the reputation of medicine, are well befriended by the daily press. We

regret to temper this admission with any qualification, but the unfortunate proneness of zeal to consort with ignorance and to proclaim this failing in the press as elsewhere leaves us no alternative. A writer in one of the local newspapers of the metropolis has recently interested himself in the problem of hospital finance, especially with that part of it which concerns the Great Northern Central Hospital. Naturally and rightly, he commends the practice of that hospital. He can hardly say too much in praise of the practitioners who have there worthily done their duty (though not alone in that glory). Here his own financial operations break down, for having thus well paid the Æsculapian Peter he proceeds to rob the unmitred Paul who administers physic *in partibus extra muris*. He would cast no slur, he tells us, upon "local" practitioners as a body—a somewhat confusing description, which we may freely translate as equivalent to what we call general practitioners—but the professional services of many such are, he says, worse than useless. He then draws an imaginative picture of medical men who were qualified twenty years ago, then went to sleep, and learnt their craft no more. Some of them, he says, should not be allowed to attend a sick dog. He solemnly warns the public that they cannot learn these truths too soon. We would, on our part, rather caution them not to accept them too readily from this authority. As everyone knows, there are degrees of excellence or the reverse in every calling—medicine and even journalism not excepted. Nevertheless, a criticism so ill-informed and so sweeping as that to which we have referred, though ostensibly favourable to one section of the medical profession, can only be regarded as gratuitously insolent towards another not less deserving, and we trust it will be so received by the public to whom it was addressed in what was, perhaps, a moment of aberration.

## "WALLACE-ISM!"

WE have received a publication called the *Herald of Health*, edited by C. Leigh Hunt Wallace, and "having for its object the physical regeneration of man." Other objects are, we gather from a study of its pages, vegetarianism, anti-vaccination, the puffing and vending of a non-poisonous preparation of aconite, and generally to further the interests and tenets of a sect called "Wallace-ites." We never heard of them before; they are not among the 293 sects mentioned as having places of worship in the list given by Whitaker. However, it is well known that the best work is generally done in silence. Although the *Herald* scoffs at medical men and medical science—*vide* page 26 of the February number—yet it advertises a professional preliminary school for girls. To quote from the prospectus: "The object of this school is to provide girls with a sound all-round education, and at the same time prepare them for these professional preliminary examinations so that they can, while with us, or later on, register themselves as medical students without further preparation." This school is at 5, Osnaburgh-terrace, and the same address is given as being a boarding-house for Wallace-ites. Now we should very much like to know how the professional preliminary girls and the Wallace-ite boarders are all to be accommodated in the same house consistently with the laws of healthy housing, unless, indeed, the number of both classes is extremely small. Is the house run upon a kind of Box and Cox arrangement, or do the professional preliminary girls only come for instruction during the day? or how are things managed? There are a number of other interesting advertisements, e.g.:—"Monthly nurse. Vegetarian, hygienist, teetotaler? Diploma. No doctor necessary. Mrs. ——, ——, N.W." If no doctor is necessary the professional preliminary girls will not get much work out of the followers of the *Herald of Health*. Fads such as this paper advertises do not as a rule do much harm, but we most strongly object to people being allowed to sell so-called non-poisonous preparations of aconite. Already one unfortunate man has died after taking a dose of Wallace's specific, No. 1, or, to quote the verdict of the coroner's jury, "from cardiac failure produced by a poisonous dose of aconite contained in a bottle labeled Wallace's specific, No. 1." The sale of this nostrum, even when labeled "Poison," ought to be sternly put down altogether or else its composition should be inscribed on the containing bottle or packet.

## THE MIDWIVES QUESTION IN VIENNA.

THE interesting communication in THE LANCET of Feb. 6th from our own correspondent in Vienna on the lamentable state of medical practice in that city is worth much consideration. It shows that even in a State which regulates medical and midwives' practice more than is done here medical practitioners are badly protected from gross evils. The article is, indeed, full of instruction. The legislation in Austria, which requires insurance against sickness by working men is about to be extended to employers and tradesmen, and doubtless, implies the further degradation of the remuneration of medical men. Unqualified practitioners continue to increase. The competition of the hospitals giving gratuitous treatment is on a huge scale. And midwives do a great deal not only of midwifery practice but of general practice, especially among children. They dissuade parents from sending for medical men by saying that the practitioner will notify their cases and lead to the expense of disinfection. The impression conveyed of the intelligence of these midwives is very poor. They deal in charms. They treat eye diseases of new-born children with milk or with urine, and if convulsions occur put on the mother's wedding veil. Those persons who are concerned for the plight of women attended by midwives in this country and also wish to protect them by legislation and registration should study these revelations and introduce securities that midwives, if they are to be registered, shall also be restricted to very plain and palpable duties.

## "CHILD STUDY."

A PUBLIC meeting was recently held in Manchester at Owens College in connexion with a local society for "child study," which is now to be made a branch of the national association for the same purpose. Dr. Ashby, on the proposal of Principal Ward, presided, and said that a small association was formed in Manchester last year and that now affiliation was sought with the British Association for Child Study. To those who had read the delightful essays of Professor Sully it was not necessary to explain the object of the society. During the last few months some of their candid friends had asked if they were going to experiment on newly-born babies—if they were going to put pepper or salt on their tongues to try to find out at what exact period they appreciated these useful condiments. They were asked if they were going to repeat the experiments on the prehensile faculty of infants in order to demonstrate their affinities with our lower relations, and if it was intended to make the nursery a temple and the baby an idol. They had no intention of doing any of these things, but would work under the direction and with the help of some distinguished psychologists and biologists, and they would also seek the assistance of mothers, nurses, and teachers—"all those, in fact, who were the associates of the infant in its early days and had the shaping of its destinies. There was still a good deal of rule-of-thumb work in the British nursery." Professor Lloyd Morgan of University College, Bristol, gave an address on the aims and

methods of such a society. He based the primary claim of child study on the bearing it had on education and was convinced that systematically undertaken it would tend to give right ideas and to eradicate wrong ones, and thus be "influential on the practice of education." In the past psychologists had been too introspective, and had given the results of self-analysis, and had thus evolved a psychology of sages; but it was most desirable that they should make their science more thoroughly comparative by the investigation of psychological processes in minds at a lower stage of development. By working hand-in-hand "the trained psychologist and the teacher by profession would attain to results which in the largest and fullest sense would tend to give right ideas and eradicate false and erroneous notions." Professor Morgan said the subject of perception and conception as exercised in tolerably close touch with sensory data would, he was sure, amply suffice for the session's work. He indicated what could be done in testing the sensory endowments. The range and accuracy of vision, the perception of colour, the recognition of visual objects, experiments on hearing, observations on pressure perception, space perception, memory, and the subject of association and suggestion were among the points discussed. Dr. Mumford, who has taken the initiative in the formation of the local society, in which he was ably backed by Professor Alexander, proposed, and Professor Wilkins seconded, a vote of thanks to Professor Morgan for his address. The study of child life and the patient watching for the gradual development of the physical and mental faculties—for the first smile of recognition—afford as fascinating a study as any young mother wishes for or can imagine; but the "scientific" observation of "their powers of estimating angular value or relative weight" will perhaps only be thoroughly appreciated by the "new woman." And the nursemaids, whose aid Dr. Ashby invokes, must surely be required to undergo training and "registration" before being called on to give the results of their observations. Professor Morgan says, truly enough, that the child's coöperation must be obtained, and that if while making experiments on his perceptive powers the "trained psychologists" sat solemnly by, taking mysterious notes, he did not think the results would be satisfactory. "We must place ourselves as nearly as might be on the same plane as the children. What we desired them to do we too ourselves must do. The observers' notes should be written up afterwards." These are most judicious remarks, showing already some knowledge of child life. It would be charming to see the professors become "as little children," and most interesting to know the verdict of the experimented on the perceptive faculties of the experimenters. There is much we should like to learn as to the "dawn of intelligence," and we wish the society every success.

## THE NOTIFICATION OF MEASLES.

IT has for a long time now been a disputed point as to whether or not measles should be included among the notifiable diseases. At first sight it would appear inconsistent not to include within the Act a disease which is at the same time one of the most infectious and fatal of those which prevail in this country. Further consideration, however, will quickly show that there are many difficulties in the way of making the fact of notification a useful means of checking epidemics, and it has actually been shown that in many places where such a system has been adopted the epidemics have been quite as widespread and uncontrollable as before. In times when no epidemic is in existence it is probable that the notification of odd cases might occasionally lead to prevention of further spread, but when an epidemic has once set in the difficulties become enormous. The disease spreads so rapidly that to ensure any chance at all of stamping it out at its commencement a large staff would always have to be kept in readiness, which would lead to a very great expenditure and a very doubtful gain. The onset of measles makes it a very difficult disease to identify in the early stage, for, unlike the more definite onset of scarlet fever with the early appearance of a rash, its first symptoms are often treated with the family remedies for a cold, and it is usually not until the seeds of infection have been widely scattered that its nature is definitely recognised and measures are undertaken to prevent it spreading. On the other hand, if this disease came within the Act it might, perhaps, teach the public to look upon it with rather more awe, which it is rightly entitled to by reason of its great fatality. We have before us a report on this subject which Dr. Corfield has made to the vestry of the parish of St. George Hanover-square, in which, after due consideration, he advises that body not to adopt the system of notification. His inquiries into the subject show that the plan has failed to produce any effect in many places where it has been adopted and he does not think that the doubtful advantages received would in any way justify the enormous expenditure which the adoption of such a scheme would necessitate. Among the methods for checking an epidemic Dr. Corfield has great faith in the early closing of infant schools, which, if adopted soon enough, should be very beneficial, and he further dispels the illusion that children catch the disease just as easily after the school is closed by playing with each other in the courtyards and streets, for fresh air is always an antagonist to disease, though we are afraid that the germs may live comfortably, even if they do not thrive, in the stagnant and darkened atmosphere which occupies the limited spaces between so many London dwellings.

## CENSURE BY A CORONER.

FROM a report in the *East Anglian Daily Times* it appears that on Feb. 4th an inquest was held by Mr. J. Harrison, coroner for Essex, at Wivenhoe, touching the death of Henry Robert Childs, aged fifty-six years, a painter. The body of deceased was found in the Colne in about three feet of water and four or five yards from the edge. After the tide had gone down footmarks could be traced for sixty yards down the sand from the sea wall. During the inquiry the jury expressed a desire to know when Dr. Hewlett of Wivenhoe last attended deceased and for what malady. In furtherance of this wish the coroner despatched his officer to ask Dr. Hewlett for information or to request his attendance. Dr. Hewlett replied: "I decline to give any information here, as I consider it unprofessional to give evidence and testimony to a police officer which should be given only by the medical man in person at the coroner's court. I was prepared and, moreover, perfectly willing to attend the inquiry as a witness if desired." On the message being reported to the coroner he said to the officer: "You tell Dr. Hewlett from me that if he sends me messages like that I shall commit him for contempt of court, and he will find himself in a funny position." Subsequently he informed the jury that Dr. Hewlett had sent back "a most insulting message" and that unless he had an apology he should certainly have him before him next time he had an inquest in Wivenhoe. If the facts are correctly reported, we have no hesitation in saying that, in our opinion, Dr. Hewlett's action was consonant with both the spirit and the letter of the law. A medical man is not bound to state to a coroner's officer the evidence he would be able to give. Nor do we consider a verbal request to attend an inquest is sufficient. By the statute 6 and 7 Will. IV., c. 89, the first section enacts "that whenever it shall appear that the deceased person was attended ..... during his last illness

by any legally qualified medical practitioner it shall be lawful for the coroner to issue his *order in the form in the schedule* thereunto annexed for the attendance of such practitioner as a witness." We find no mention of any alternative method of demanding the attendance. In Jervis's "Coroners" it is laid down that "in all cases of sudden or violent death ..... it is desirable that a surgeon should be called as a witness, and if the deceased has been attended by a medical practitioner his attendance should be secured, care being taken that he is able to identify the body." We have repeatedly endorsed this opinion, and although the coroner in this case undoubtedly acted within his powers we think that he would have shown greater discretion if he had issued an order for Dr. Hewlett's attendance in the first instance. Failing that, however, there can be no doubt that on the presentation of the jury he should have adjourned the court for Dr. Hewlett's evidence on oath under subpœna. To say nothing of the serious inconvenience that may be caused to a medical man by being unexpectedly and peremptorily required to attend an inquest at once, we consider that both by courtesy and law he has a right to expect a formal summons at due notice. A coroner's court is one of first instance and hearsay evidence is admissible, but nevertheless this should be taken only as a substitute when direct testimony on the point at issue is not procurable. Again we quote Jervis: "If during the inquiry it appears that there are persons whose testimony is material and who are not in attendance, the coroner may *issue his summons* to compel their attendance," and "the coroner, being guided by the information he has received, usually sends a message to those whom he thinks material. Should they neglect or refuse to attend the coroner, as incident to his office of judge of a court of record, has authority to issue a *summons* to compel their appearance ..... and he may, if necessary, issue a *warrant*. If a witness resists the warrant the coroner may commit him for contempt." If this is a correct statement of the law it is clear that in the case under discussion Dr. Hewlett was not guilty of contempt and therefore not subject to committal. We trust that there is some fault in the report of the proceedings at the inquest, for, failing that, we should be inclined to think that the coroner could with more justice be called to account for exceeding his jurisdiction than that Dr. Hewlett should be committed by the coroner for contempt. It may be in the recollection of our readers that some years ago, when the late coroner for Middlesex insisted upon fully exercising his legal powers with regard to the holding of an inquest and the manner of conducting it, the subject was made the matter of an interpolation in Parliament, and that the Home Secretary, whilst admitting that the coroner's procedure was within the four corners of the law, hinted at the clipping of coroners' wings unless they acted with more discretion.

## MODERN LAW AS TO VACCINATION PROSECUTIONS.

ON several occasions recently prosecutions of defaulters under the Vaccination Acts have failed owing to the omission on the part of the prosecutors of what was held to be a necessary detail—i.e., the vaccination officer had not been furnished with special written instructions to take proceedings in each case. It is difficult to ascertain upon what grounds it has been held that such instructions were essential, but it is certainly a fact that the ardour of boards of guardians has in some instances been somewhat damped owing to cases in which this detail was omitted having been dismissed. It appears, however, that the legal profession has recently been looking up the law on the subject, and has now arrived at the same position as has, we believe, been held all along by the Local Government Board. A decision having been given at Ipswich that it was not necessary for the guardians to issue separate instructions for prosecuting in each case, or, indeed, any instructions at all, reference was made to the Court of Appeal and the decision was upheld. Mr. Justice Wright, in giving judgment, is stated to have said that the law had been altered, but we fail, having regard to the fact that there has been no recent legislation on vaccination, to understand how this can have been the case. However, his judgment was that the vaccination officer could proceed without any express instructions, and Mr. Justice Bruce, in concurring in the decision, pointed out that the vaccination officer was, by the fact of his appointment, entitled to take proceedings. This decision will do much to clear the air, and it is to be hoped that clerks to all boards of guardians will pay due attention to it. We note that the judgment bore fruit on Feb. 11th at West Ham, when some twenty defaulters were brought before Mr. Baggallay and orders in all cases were made. One of the defaulters asked to see the authority of the vaccination officer, and it turned out that he had received only general instructions. It would seem, however, that not even these are now considered necessary, and the defendant having failed to carry this point endeavoured to obtain relief under the recent report of the Royal Commission. Mr. Baggallay, however, replied that a magistrate's duty was to obey the law, and that the law had as yet no concern with "conscientious objections."

## MOVEMENTS OF VOCAL CORDS.

THE last volume of the *Philosophical Transactions* contains the record of an important piece of work in reference to cerebral localisation by Dr. Risien Russell. The title of the paper is "The Influence of the Cerebral Cortex on the Larynx," and it describes in considerable detail the experimental work which the author of the paper had undertaken and carried through with the object of showing to what extent, and in what degree, the various laryngeal movements are represented in the cerebral cortex. It is only natural that Dr. Russell's recent experiments, in which he was able to demonstrate the presence in the cortex of centres for various ocular movements other than those merely of conjugate deviation, should have suggested a similar line of research in reference to those of the vocal cords. It will be remembered that these experiments on ocular movements were undertaken at the suggestion of Dr. Hughlings Jackson, who thought that by dividing the muscles which subserve the lateral ocular movements it might be possible, by stimulation of the area of the cortex subserving them, or of some neighbouring part of the cortex, to evoke other ocular movements. Such, indeed, proved to be the case, and in the present investigation, as has been said, a similar procedure was adopted to try whether it was not possible to obtain abduction as well as adduction of the vocal cords. The experiments were carried out, of course, with the animals anæsthetised, and in one series of experiments the movements of the cords were directly observed, while in another the results were graphically recorded by means of a tambour and kymograph. In many of the experiments also the abductor bundle of fibres in the recurrent laryngeal nerve was separated from the adductor bundle—a procedure which Dr. Russell had previously shown to be not only feasible, but comparatively easy. The cerebral cortex was stimulated under different circumstances. 1. When both recurrent laryngeal nerves were intact. Under these conditions adduction of the cord was usually obtained, but in the dog occasionally abduction was obtained, and in the cat an additional abductor centre was found corresponding closely in position to that of the centre from which abduction was obtained in the dog. The most

careful observation failed to reveal unilateral movement of the vocal cords or the slightest difference in the time or manner of their movement. 2. It was also found that if one laryngeal nerve were cut, the vocal cord of which the nerve was still intact could be equally well stimulated from either side of the cortex cerebri. 3. It was when the adductor fibres alone of one nerve were divided that there was first found evidence of the representation of abduction of the vocal cords in the cortex of the dog. It was found possible to evoke both abduction and adduction under such circumstances, but whereas both cords participated in abduction, only that cord of which the adductor fibres were intact in the recurrent laryngeal nerve was adducted. 4. If one recurrent laryngeal nerve were completely divided, and the adductor fibres only in the other, abduction of the cord of which the recurrent laryngeal nerve contained intact abductor fibres could be elicited on stimulation of the proper centre in either cerebral hemisphere, and if the adductor fibres in both nerves were divided—leading to a widely open condition of the glottis—excitation of the abductor centre led to still greater abduction of the vocal cords. The focus which has thus been marked out in the cortex cerebri of the dog is in the anterior composite and prorean gyri, and that it is probably the true abductor cortical centre for the vocal cords is made more likely by the fact that it is precisely in the same region in the cat's brain that the effect is to be obtained. But in the cat there is this great difference, that abduction can always be evoked on cortical excitation, whether the adductor fibres in the recurrent laryngeal nerves be intact or not, whereas in the dog it is sometimes necessary to divide the adductor fibres in one recurrent laryngeal nerve before it is possible to elicit abduction on cortical excitation. The result of the research, therefore, broadly stated, has been to differentiate centres stimulation of which causes abduction of the vocal cords. There are many other minor points of considerable interest referred to in the paper, in regard to which the original should be consulted by those interested, and Dr. Russell is to be congratulated not only on the results of his work, which are interesting and important in an unusual degree, but also on the care and ingenuity which he has shown in the various stages of the research and the lucid manner in which he has detailed his procedures.

## ANTI-VIVISECTIONIST TACTICS.

IN a letter which appears in our columns attention is called to the fact that the Anti-Vivisectionists' Society is at present using most unscrupulous methods to lead the public astray on the question of vivisection. From personal experience we know that this is the case and that a large number of well-meaning but thoughtless individuals are at present carrying about petitions which they can certainly not understand and which are calculated to do an immense amount of harm amongst those who have no opportunity of knowing that much of what is stated in these petitions is absolutely false and much intentionally misleading. These petitions are carried to every drawing-room meeting, and to church meetings of all kinds, and a number of signatures have been obtained, especially from people who do not take the trouble to inquire into these matters for themselves. As our correspondent points out, Sir Spencer Wells, a man who is said to have relieved an enormous amount of suffering amongst women, could not have obtained the results he did had he been so foolishly sentimental as to put the lives of a few animals against the number of lives he has been able to save and the amount of suffering he has succeeded in alleviating. Even those who have followed him, although they have done no animal experiments themselves, must recognise their indebtedness indirectly to the earlier experiments on animals. Unfortunately there are always a large number of people who are easily influenced by specious statements and plausible arguments, especially when they come from people who apparently speak with authority, but we should like all who are asked to sign this petition to insist on a definite answer to the following question: Could the antitoxic treatment of diphtheria have been evolved and could it be carried on without experiments being made on animals? Having got an answer to this question we should like them to ask the following: Is it true or is it not that there has been a great diminution in the percentage-mortality of diphtheria—representing last year in the Metropolitan Asylums Board Hospitals alone a saving of 250 lives and an enormous amount of suffering to the children of those to whom this unscrupulous circular is addressed; whilst in a certain class of case—that following scarlet fever—the death-rate has been reduced from over 60 in a 100 to less than one-tenth of the original mortality? When these questions are satisfactorily answered people may begin to consider whether they will sign these petitions or not, but until then all who have children of their own will be wise to withhold their support from a movement which is kept alive by faddists, many of whom do not object to taking animal life or the infliction of animal suffering where their own selfish interests and pleasures are concerned. We are perfectly willing to discuss this matter with those who are consistent throughout, but for most of those engaged in this so-called crusade we hope that honest people can have little but contempt; indeed, if their methods were not so persistent and so unfair most people would wish to forget them as soon as possible.

## MENTAL DEFECT IN CHILDHOOD AND INCREASE OF INSANITY.

IN the House of Commons questions were asked a few nights ago concerning the alleged increase of insanity, and also as to the discrimination of children who are weak-minded only from those who should be sent to an asylum as imbecile. The number of insane patients in institutions has increased largely of late years; but the question as to actual number of persons becoming insane is one upon which authorities differ. A special report has been prepared by the Lunacy Commissioners, which is now in the printer's hands. Whatever may be shown by that report as to increase of the numbers of lunatics or otherwise, it is very desirable to consider whether any public means can be taken to lessen lunacy in adults by better care of the mental conditions of children. It is frequently found that a brain unstable from early years becomes insane under the pressure of life, and one means of prevention worthy of consideration is the discrimination of such children and their care. There are children of imperfect intelligence and low mental power in judgment, memory, and social sense whose bodies and brains are not so far abnormal as to justify their certification as imbeciles; again, there are children distinctly mentally exceptional, not necessarily dull in intellectual power, but destitute of moral sense and the knowledge of right from wrong, or of the decencies of social life and conduct, who are never truly sane, children of unsound mind though not imbecile. There are no sharp lines of discrimination between these groups and normal children that can be defined by single defects indicating mental weakness. We would suggest that for practical purposes an individual child should be classed and dealt with on a medical report showing defects in health and in points of bodily development, especially of the head, palate, and features; also describing abnormalities in gait, in expression, movements, or response in action as well as speech, while the mental power is tested by questions as to knowledge, judgment, and memory. It is important that some facts should be

stated as well as an opinion expressed by the medical certificate in any case of mental deficiency. This question of discriminating children of feeble mental power from imbeciles is a part of the reference made by the President of Council to the Departmental Committee appointed to report on the education of children of defective intellect.

## THE APPRECIATION OF THE GENERAL PRACTITIONER.

THERE are some indications that the rage for specialism has reached its height, and that the public are coming to see that they must rely for medical aid in nine out of ten of the medical emergencies of life on the general practitioner. Not only so, but for the general direction of life, for making the best of a person's physical and mental constitution, more will depend on the ordinary adviser, provided he be a man worthy of his vocation, than upon a consultant, however expert, who sees the patient once or twice in a lifetime. The *New York Medical Record* has a leading article on this subject, based on some remarks by no less a personage than President Cleveland, who, at a recent meeting of the semi-centenary of the Academy of Medicine, sounded the praises of the old-school practitioner who met all the emergencies of treatment in the last generation. He was supported in this view by Dr. Jacobi, who, speaking of the actual needs of medical practice of to-day and giving specialism its due meed of praise, expressed himself strongly in favour of re-instating the all-round man. It cannot be doubted that with the ever-improving qualification of the general practitioner the force of these considerations will gradually prevail.

## THE PROPOSED SUPERANNUATION OF LOCAL AUTHORITIES' OFFICERS.

WE are glad to see among the Bills introduced to the House of Commons by private Members one which has for its object the superannuation of the officers and servants of local authorities. This latter term has a wide significance, as it includes practically all local bodies having sanitary and parochial functions, outside boards of guardians and other authorities, to which the Poor Law Officers Superannuation Act of last session relates. Thus we see the councils of all boroughs and urban and rural districts, school, highway, burial, and joint boards under Public Health Acts, and public libraries and baths commissioners and vestries named as coming within the definition. The Bill proposes to secure for all officers and servants as defined superannuation allowances on the basis of the Act just referred to, which Act, in so far as it can be made to apply, is printed in a schedule to the Bill, the main measure being made to refer to the schedule as extending to local authorities in the same way as to Poor-law authorities, with such differences only as are essential to the proper reading of the Act as thus extended. Thus, clauses of the Act relating to the title of officers and servants to superannuation allowances, the scale of such allowances, the method of reckoning services, the power to add years to actual service for the purposes of the Act, cases of subsequent appointment, forfeiture of claim on account of fraud, the return of contributions in certain cases, scale of contributions, and decisions of questions, together with some other provisions of the Act, are incorporated in the schedule as now set out in clauses 2 to 14 of the Act. Existing officers and servants may write themselves out of the scope of the proposed measure, as in the main Act, and any person doing so will remain subject to the provisions of the Metropolitan Officers Superannuation Act of 1866 if he be in the service of any authority to which that Act applies. Otherwise that Act is to be repealed. "Officer" means every officer in the service of a local authority and every assistant overseer and vestry clerk, except officers on the teaching staff of a board school. We learn that already public vaccinators are busying themselves in the direction of taking steps to make this proposed measure a means of securing to them the benefits denied under the Act of last year. We hope that they will be successful. The whole Bill has our sympathy, no reason appearing for the withholding from the officers coming within its scope the benefits which are now allowed to those in the Poor-law service. We cannot imagine that the House of Commons is likely to stand in the way of the superannuation of men who have devoted themselves to the service of the community in matters of public health, education, and cognate matters. This is an age of pension schemes, and where, as in the present case, authorities propose to reimburse themselves by a system of deferred pay for the granting of an old-age allowance to their officers and servants there seems no objection to the scheme. The servants of the Crown already possess the privilege, and now the Poor-law has a similar privilege for its officers; the present session will, we trust, witness the enactment of the Bill before Parliament, either as it stands or, at any rate, substantially as now drawn.

## A NATIONAL PHYSICAL LABORATORY.

UPON Feb. 16th a deputation of scientific men headed by Lord Lister waited upon Lord Salisbury to induce the Government to supply funds for the foundation and maintenance of a National Physical Laboratory. The initial expense it was said would be £30,000 and the annual cost of maintenance, £5000. Lord Salisbury, in reply, acknowledged the extreme importance of the matter, but could not undertake to give any pledge in the absence of the Chancellor of the Exchequer. With regard to expense he said two important words which appeared in the printed statement had been omitted by the speaker. The amounts mentioned were in that statement put down as being necessary "at first." He had known modest movements which started with thousands to end in millions. He threw out as a suggestion that instead of asking the Chancellor of the Exchequer to pledge himself to outlay to which no bounds were set, some limited scheme of standardising for stopping adulteration should be pressed upon the State, and the question of general research reserved or allowed to depend on private munificence. We should be glad to see Lord Salisbury's scheme adopted, for the prevention of adulteration is a most important matter. He is quite right as to the probable increase in the expenses; and no one who remembers the increase of Mr. Forster's education rate of threepence in the pound to close upon a shilling can think otherwise.

## THE WATER-SUPPLY OF CHICAGO.

THE city of Chicago, in spite of the great engineering work that was carried out in 1893, has not yet secured a satisfactory water-supply, and we understand that the Department of Health has considered it necessary to shut off the town water from as many as 250 public schools with an aggregate of 208,000 scholars. The task of making special arrangements for the supply of water upon so large a scale must be a very formidable addition to the duties of the School Board. The first impression of the visitor to the city on looking out upon the broad expanse of Lake Michigan, and learning that it is an inland sea of singularly pure and potable water, is that here at least the question of water-supply is solved by nature, whatever the dimensions or demands of the city may be which stands upon the shore. But, in point of fact, the very abundance of the water is its bane. If a river of moderate dimensions flowed through the city there would be no fear of contamination. The simple expedient of placing the water intake above the sewage

outflow would make the city absolutely secure against this peril. But in Lake Michigan the volume of water is so vast that the flow is imperceptibly slow, and so long as any part of the city's sewage is permitted to flow into the lake there will be a danger of its drifting into the water intakes. Our own experiments made in 1892 (*vide* The Report of THE LANCET Special Sanitary Commission of Inquiry concerning the Water-supply of Chicago, U.S.A.—THE LANCET, April 8th, 1893) showed that this danger was notably reduced by putting the intake at a distance of three or four miles from the shore; but they also showed that this was no complete protection, and now the experience of the School Board confirms our experimental results and enforces the conclusion that complete isolation of the water-supply is the only safe and trustworthy course. Unfortunately for a community residing on the shores of a great lake, it is a course presenting many and special difficulties. In these circumstances it is no small matter that it has a great reputation for enterprise and public spirit to maintain.

## THE MEDICAL PROFESSION AND MASSAGE ESTABLISHMENTS.

WE think it quite time that forcible protest should be made in the name of the medical profession against the custom of advertising establishments, which, to put it mildly, are quack institutions, as places for the giving of electric baths and massage. The objects for which most of these establishments exist are perfectly well known and it is not our purpose now to deal with that aspect of the question. That is a matter for the police. What we do most strongly object to is their masquerading under the cloak of providing medical treatment. Electric baths, if properly given, are a very valuable method of treatment; but to try to give them in a metal bath is worse than useless, even if the metal be painted. The baths in two widely-advertised houses which were visited were ordinary metal baths; no questions were asked about the complaint from which the visitors might be suffering, and the whole style of the rooms, the "nurses," and the establishment generally left no doubt as to the purposes for which the places were used. These baths are advertised in the most respectable newspapers, and the advertisements are couched in such terms as to give the idea that the houses are places where definite medical treatment is carried on. This must be altered. Let the proprietors either use the expression in vogue in the eighteenth century for a like place—e.g., "bagnio"—or the old English word "stew." We are not now concerned with the morality or otherwise of the question, but we must insist upon the advertisements being so worded that the medical profession should not appear to have anything to do with such places. The police can surely do the rest.

## THE POSITION OF THE AURICULO-VENTRICULAR CUSPS DURING SYSTOLE.

IT is usually taught in this country that during systole the thin edges of the auriculo-ventricular cusps "outside the attachments of the chordæ" (Foster) are kept flatly in apposition by the contraction of the papillary muscles simultaneously with the ventricle, and that the same muscular action keeps the cusps as a whole convex to the ventricular cavity. The pictorial representation of this state in transverse sections conveys the impression of the valves being locked up and bulging towards the auricle, an impression which is certainly erroneous. Dr. Cockburn Smith, in a letter in another column, calls our attention to a view held by many on the Continent and said by some to have originated with Parchappe. According to this the effect of the muscular actions we have referred to is to "pull down the auriculo-ventricular curtains," applying the valves one against another, and in the case of the left ventricle to the outer wall of that cavity, while in the right ventricle the approximated valves lie against the septum ventriculorum. Parchappe's book is valuable and interesting and his views, which, however, were not solely his, were in the main correct, as may be easily demonstrated. In a paper on the Action of the Valves of the Mammalian Heart, published by Dr. Noël Paton in the Laboratory Reports of the Royal College of Physicians of Edinburgh (vol. iv., p. 36) the same view in its essential points is maintained, and references are given to the works of Meckel, Mayo, Reid, Hope, and Burdach, who preceded Parchappe in entertaining it. Dr. Paton's experimental methods may be learned by consulting his paper, but anyone may convince himself of the truth of this view by purchasing the heart of a sheep killed by bleeding which has died with the heart in systole and dividing that organ so as to expose the interior of the ventricle with its taut cusps and contracted ventricle and papillary muscles. It may be readily conceived how such a disposition of these valves is calculated to strengthen their power of resisting intra-ventricular pressure when it is at its maximum at the commencement of systole and how so powerful a barrier against regurgitation quickly gains the upper hand in its struggle against distension, as the latter quickly subsides with the diminished size of the contracting ventricular cavity and the forward movement of its fluid contents.

## PAR NOBILE FRATRUM.

THIS week we are able to lay before our readers two addresses of exceptional interest, full of references to events which have become historical, and commemorative of some of the greatest names in British medical science. Although the Hunterian Orations have for so many years been the congenial theme of practised speakers and writers, the subject is in no danger of becoming tedious or threadbare, for the story of John Hunter's life and work is incapable of compression within the limits of a single discourse, and the author of the oration each year has therefore considerable opportunities of selecting the topics for which he has a special preference. Mr. Christopher Heath has succeeded in everywhere manifesting a pleasant freshness and vitality, a sure sign of a speaker being both in sympathy with his subject and thoroughly familiar with the various developments which it has undergone in the hands of successive investigators. On account of its essentially practical nature John Hunter's anatomical and surgical work readily admits of being quoted from even under the very altered circumstances which have come to pass in the course of upwards of a hundred years, and in this respect he is perhaps placed at an advantage over his elder brother William, whose similarly distinguished career is outlined in the oration delivered by Dr. Hingston Fox before the Hunterian Society. Originality of mind and unwearied assiduity were the special attributes of these two brothers. They each had the satisfaction of knowing that their work was appreciated by their contemporaries; and more appropriate monuments to the memory of such men there could hardly be than their own museums, the one preserved by the Royal College of Surgeons of England and the other by the University of Glasgow.

## THE RECENT LUNACY COMMISSION AT BOLTON.

AT the Bolton County-court, during the last week in January, Mr. Fischer, Q.C., one of the Masters in Lunacy, was engaged, with the assistance of a jury, in holding an inquiry respecting the state of mind of Mr. Arthur Knowles, a Bolton cotton spinner. The proceedings were instituted on the petition of the wife, and the case, which was of a

somewhat unusual and painful nature, created much local interest. In such cases the rule is laid down that evidence relating to the presence of insanity in the alleged lunatic must be restricted to a period of two years preceding the inquisition. The testimony of the witnesses, both lay and medical, was of a contradictory character. Three medical men, including the family attendant, testified to the defendant's mental incapacity; on the other hand, several experts gave it as their opinion that he was capable of managing his affairs. Between the latter and the petitioner's counsel there was a pretty display of dialectical fencing. The most remarkable feature in the case was that it was admitted by the defence that in May, 1895, the defendant was of unsound mind. Previously to this he had several attacks of influenza, the last of which was followed by a slight attack of melancholia. Always of a religious turn of mind, he became more intensely so, declared he was Jesus Christ, and at Ilkley Moor on one occasion denuded himself of his clothing in a public place. Subsequently he associated himself with a peculiar sect who believed in faith-healing, and roamed about the country attending holiness conventions, returning to his home accompanied by other believers, his inferiors in social status, to whose presence in the house his wife naturally objected. Space forbids entering into all the salient features of the case, but there can be no doubt that the verdict arrived at by the jury was the correct one—viz, that he was of unsound mind and incapable of managing his affairs, for it is safe to say that if left to his own devices his religious mania would have become more intense, and hopeless insanity would probably have supervened.

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BY the result of the election on Monday last for the Bridgeton division of Glasgow another member of the medical profession obtains a seat in the House of Commons. Sir Charles Cameron, Bart., M.D., LL.D. Dub., had a majority of 125 votes over the unsuccessful candidate, Mr. Scott Dickson, the Solicitor-General for Scotland. Sir Charles Cameron represented Glasgow in Parliament from 1874 to 1885 and Glasgow (College division) from 1885 to 1895, when he lost the seat. With the political aspect of the election we have nothing to do, but we may rejoice at the fact that the ranks of the medical profession in Parliament (thanks to the recent elevation of Sir Joseph Lister to the Peerage we are able to use the more comprehensive term) are strengthened by the accession of a distinguished representative.

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A MEETING of the Executive Committee of the Society of Members of the Royal College of Surgeons of England was held on the 16th inst., when the following resolution was unanimously agreed to: "That a requisition be forthwith prepared and forwarded to the College, in accordance with the regulations, asking the Council to call a special meeting of Members at an early date, to consider the results and validity of the recent poll of the Fellows, and other matters of importance to the Members."

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AT the next meeting of the Neurological Society, which will be held in the rooms of the Medical Society, 11, Chandos-street, on Thursday evening, March 4th, at 8 30 P.M., communications will be made upon Muscle Spindles, by Professor Sherrington, F.R.S., Mr. Victor Horsley, F.R S., and Dr. F. E. Batten.

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DR. DE HAVILLAND HALL'S second Lettsomian Lecture on Disease of the Nose and Throat in relation to General Medicine was delivered before the Medical Society of London on Monday last, and will be reported at full length next week. We regret that the pressure upon our space has made the delay in publication necessary.

THE Mercers' Company have granted 1000 guineas to the special appeal for £100,000 now being raised for Charing-cross Hospital. The Leathersellers' Company have also granted £100, the Brewers' Company 20 guineas, the Cutlers' Company 10 guineas, and the Scriveners' Company 10 guineas to the same fund.

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ON Wednesday next, Feb. 24th, at 8 30 P.M., in the reference library room of the London Institution, Finsbury-circus, Mr. Victor Horsley F.R.S., will deliver the second of the Hunterian Society's lectures. The subject will be Torticollis and its Treatment. Members of the profession will be welcomed as visitors.

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THE annual general meeting of the Medical Defence Union will be held at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square, W., on Thursday, Feb. 25th, at 5 P.M. Mr. Victor Horsley, F.R.S., will take the chair and move the adoption of the annual report.

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MR. BANCROFT, as the result of his readings from Dickens's works, which we understand he intends to resume next winter with the same object, has made gifts to various hospitals in London and the provinces of sums exceeding £3000.

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THE council of the Sanitary Institute have accepted an invitation from the City Council of Leeds to hold a sanitary congress and health exhibition in that city in the month of September next.

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SIR WILLIAM BROADBENT was presented on Wednesday last, in the library of St. Mary's Hospital medical school, with a service of silver plate in recognition of his valuable work as senior physician.

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ON Thursday evening last Dr. J. C. McVail read a paper before the Epidemiological Society entitled—"The Royal Commission on Vaccination: a Review of the Dissentients' Position."

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THE International Sanitary Conference at Venice has held two meetings on the 16th and 17th inst., when the measures adopted by various nations for checking the spread of epidemics were discussed. We hope to be able to publish some account of the proceedings of the Conference in future issues.

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AT the recent election for the post of assistant surgeon to St. Mary's Hospital Mr. H. S. Collier, F.R.C.S. Eng., obtained the appointment.

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BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session was held on Feb. 10th in the Medical Library of University College, Dr. Aust Lawrence, President, being in the chair.—Dr. F. H. Edgeworth showed a patient with Intra-thoracic Tumour. Dr. Symes and Dr. Broom remarked on the case.—Dr. T. Fisher showed numerous Pathological Specimens recently added to the Bristol Royal Infirmary Museum.—Mr. C. W. J. Brasher showed a modification of Hale White's Tongue Depressor with glass shield for infectious cases.—Dr. Michell Clarke and Mr. Morton read a paper on a case of Abscess of the Lung, with operation. Dr. Elliott, Mr. Ewens, Dr. Parker, Dr. Fisher, Dr. Harrison, and Dr. Skerritt discussed the subject.—Dr. B. J. Baron read a paper on the Symptoms and Treatment of Empyema of the Maxillary Antrum, with results of operation in eight cases. Mr. Harsant and Professor Fawcett spoke on the paper.—Dr. Parker read a paper on the Diagnosis of Certain Diseases Allied to Rheumatism. Dr. Harrison made some remarks.

# The Lancet Special Commission
ON
# THE METROPOLITAN WATER-SUPPLY.

## I.

LONDON is supplied with water partly by deep wells, but chiefly by various water companies. A comparatively small amount of water only is derived from the wells, which, with one exception, are all in the hands of private individuals or of companies. The quantity of water which can be obtained from wells has lessened year by year, for the level of the underground water has sunk. No statistics are available to show the daily amount which is derived from the deep wells, but compared with that supplied by the water companies it is inconsiderable. Of surface wells it is possible that a few remain. Some moveable pumps are still used by builders in the Chelsea district, but it is unlikely that much of the water is used for drinking. Of public pumps in London few, if any, remain. One of the last to go was the historic one of Aldgate, but for years before its removal it had been supplied, not, as the people in the neighbourhood supposed, from a local source, but by water laid on from the mains of the New River Company in accordance with the directions of the tactful and sagacious medical officer of health for the City of London, who, finding that the local water was extremely impure, and knowing that the inhabitants would not tamely submit (if they knew it) to any alteration in their cherished water-supply, by a pious fraud allowed them for years to pump water from the New River supply. And it was not until the pump was replaced by a tap that complaints were rife in the district.

The well of St. Govor in Kensington-gardens was formerly derived from a spring, but the saint has deserted the shrine, and the water, it is to be feared, has lost its healing efficacy. Practically, surface wells and springs in London have ceased to exist, dry wells affect only the few proprietors of them, and the great bulk of the water supplied to the district is brought by the water companies.

In the present article we propose to give a brief and necessarily incomplete sketch of the history of the London water-supply of the past; secondly, to define the metropolitan areas which are affected by the various water authorities which supply them; and thirdly, to give a brief description of the area of distribution of each metropolitan company.

### EARLY HISTORY OF THE LONDON WATERWORKS.

The site of London was by nature bountifully supplied with water. The Thames was a large pure river and there were many springs in the town itself and in the immediate neighbourhood. Little is known about the water-supply of Roman London and few traces have been found of it; but this does not, of course, prove that during the Roman period there was not a really well-arranged water-supply. We know from recent excavations at Silchester that the arrangements there were extremely thorough and efficient. There were public baths and a large sewer which discharged beyond the walls of the city. It is probable that London and other cities in Roman times were equally well supplied, but naturally in the case of a city like London, where changes have constantly been going on and each generation of citizens has more or less destroyed the work of former ones, traces of the earlier civilisation are not frequently found. On the other hand, in the case of Silchester, which till recently remained undisturbed from the time it fell into ruins, it has been possible there to see clearly how perfect the arrangements were.

In the time of the Saxon dynasty London was a walled city with seven gates: Doe Gate and Blynes Gate or Belins Gate next to the river, Lud Gate and New Gate on the wes Creple Gate and Bischops Gate on the north, and Oeld Gate on the east. The streams of Share Bourne and Lang Bourne ran into Wall Brooke, which rising in Fensbury ran through the marshes of Moorfelde, then passed under the city wall, and flowing in a south-easterly direction ran into the Thames at Doe Gate. The river of Wells was beyond the city wall and to the west. Tod's Well, Bad's Well, and Fag's Well sent water into its left bank; the Old Bourne and the overflow from St. Bridget's Well ran into the right bank. Of these streams the names survive. The Walbrook and Langbourne are no more seen, but they have given their names to City wards.

In the time of Henry II an account of London was given by Fitz-Stephen, Thomas à Becket's secretary. He appears to have been annoyed by the number of the drunkards and by the chastity of the city dames,[1] but he spoke well of the water. "There are about London," he says, "on the north of the suburbs choice fountains of water, sweet, wholesome, and clear, streaming forth among the glistening pebble stones." The amount of water, however, soon became insufficient for the wants of the inhabitants. The courses of the streams in the city became reduced in size and in places covered by the building of houses, and the citizens were obliged to bring water from a distance. In the year 1236 a supply granted on the demand of Henry III. by Gilbert Sanford was brought from Tyburn by leaden pipes, and some years later conduits were built in various parts of the city,[2] from which water derived from this source could be obtained.

The Corporation of London provided for the cleansing and repairing of the springs at Tyburn for the Great Conduit in Chepe, and the records of 1329 give an account of the money paid for that purpose and for the beer provided for the labourers who carried out the work. The records of the City of London contain a good many entries showing the difficulties the authorities had with regard to the conduits and the water-supply generally. It was found necessary to appoint keepers of the conduit, and their chief duty appears to have been to see that the water was not stolen wholesale for the purposes of trade. In 1312 it was provided that brewers, cooks, and fishmongers should pay, at the discretion of the keeper of the conduit, for the water they used for business purposes. In 1337 there was a complaint that the brewers sent "day after day and night after night" and took tubs full of water to make their ale. After a discussion in full court by the mayor, sheriffs, and alderman it was decided that if any large tubs were in future sent to the conduit by brewers they should be forfeited and retained for the benefit of the conduit. The pipes which conveyed the water to the great conduit in Chepe passed from Tyburn to Constitution Hill, thence to the Mews near Charing-cross, through the Strand to Fleet-street. The pipes were partly above ground and therefore exposed to weather and to accident, and in 1388 complaint was made by some of the inhabitants of Fleet-street that through the breaking of the pipes their houses had become damaged by the overflow of the water. In 1390 permission was given to certain citizens residing in West Cheap to put up a conduit near the church of St. Michael le Quern, and that it should be supplied from the great pipe of the conduit opposite St. Thomas Acon. An old drawing shows that there were two lines of pipes one above the other, and it seems that the water in the lower pipe could be had gratuitously by anyone who wanted it for drinking or for household use, and that certain money was paid for water supplied by the upper pipe. The money thus obtained was applied to keeping the conduit in repair and paying the attendant in charge of the place. An entry in the City Records, 1415, tells how the mayor and corporation had ordained that the brewers who rented the fountain were not to draw any water from the small pipe below on pain of fine. As the water-supply became more and more inadequate for the supply of an increasing population riots occurred at the public conduit between the water

[1] Urbis matronæ ipsæ Sabinæ sunt.

[2] The first public cistern was the great conduit in West Cheap. It was lined with lead and the structure itself was of stone. The other conduits built in the city before the great fire were:—The Tun upon Cornhill, furnished with cistern, 1401; the Standard in West Chepe, supplied with water, 1431; the conduit in Aldermanbury and the Standard in Fleet-street, made and finished, 1471; the Standard in Fleet-street, Fleet-bridge, 1478; the conduit in Glass-street, 1491; the conduit in Glass-street, re-built by William Lamb, 1577; the Little Conduit in Stocks Market, re-built about 1500; the conduit in Bishopsgate, 1513; the conduit in London-wall against Coleman-street, 1528; the conduit in Aldgate, supplied with water from Hackney, 1535; the conduit in Lothbury and Coleman-street, near the church, 1546; and the conduit of Thames water at Dowgate, 1568.

carriers, so that the Lord Mayor by proclamation forbade people who resorted thither to come armed with clubs and staves. People who lived near the Thames obtained their water from carriers, whose business it was to deliver it from the river. It seems, however, that the people who lived in the lanes near the Thames objected to others passing without paying toll, and the water carriers or "cobs," as they were called, were a very truculent set of people. In 1438 the Abbot of Westminster granted to the Lord Mayor and citizens of London the privilege of taking water from the Manor at Paddington. The consideration to be paid by the city to the Abbot and his successors was two peppercorns on the Feast of St. Peter. It was provided, however, that if this work should interfere with the ancient wells used for the supply of the Abbey the grant should cease. In 1568 water was raised by machinery to the conduit on Dowgate-hill.

In 1582 a man named Peter Moris or Morice, an ingenious engineer, undertook to supply the city with water pumped from the Thames. The exact nationality of Peter Moris is open to doubt, but he was a Freeman of London. He put up an engine at the first arch of London Bridge, and by means of water wheels, which were driven by the river, he was able to force water through leaden pipes at such pressure that it was thrown over St. Magnus's steeple, to the great admiration of the mayor and corporation and the people who met to see the sight. He afterwards obtained the lease of the second arch of London Bridge and was thus enabled to increase the amount of water supplied. The Moris family built up an excellent water business, which was carried on by the family until the beginning of the eighteenth century, but the amount supplied was not sufficient for the whole of London. Thames water was conducted in leaden pipes to supply houses in Thames-street, New Fish-street, and Grass-street, and as far as the north-west corner of Leadenhall. The work was completed in the year 1582 on Christmas-eve. The City authorities paid the costs of the main pipe which conveyed the water to a standard made for that purpose. This standard, called the "Carrefour," had four spouts which pointed in different directions, and not only supplied the inhabitants of the houses near, who sent to fetch the water, but it served to cleanse the streets and discharged water northwards towards Bishopsgate, eastwards towards Aldgate, southwards towards the Bridge, and westwards towards the Stocks Market. It seems that the amount of water first supplied was not maintained, and Fleming, who continued Holingshed's Chronicles, says: "If the said water were maintained to run continually, or at least every tide, some reasonable quantity, as at first it did, it would have been well; but from 1566 it was much aslaked, through whose default I know not, sith the engine is sufficient to convey water plentifully." The standard at Cornhill existed until the Fire of London. It was sometimes dry, sometimes overflowing, and was frequently indicted as a nuisance for the latter reason by the inquest of Cornhill ward. The water business started by Moris was continued at London Bridge for one century and a half, and a tower was built on the bank as early as the reign of Elizabeth. The Great Fire destroyed some of the property, and in consequence of this litigation occurred at the petition of Mary Moris, widow of John Moris, against her brother-in-law Thomas and the trustees of the estate. In consequence of the fire the defendant, Thomas, tried to get out of paying her jointure, which was to have come out of the profits of the waterworks, and the petition was brought to enforce settlement of this and was successful. The trial showed that the water business was a very lucrative one. The progress of the New River ultimately interfered somewhat with the profits, and the proprietor then sold the property to one Richard Soames, a citizen and goldsmith, for £36,000. Soames was a financier and soon brought the business out as a company, with a capital of 300 shares of £500 each. In June, 1767, a fifth arch of the bridge was granted to the waterworks by the Corporation. The works continued until 1822, when they were removed just before the destruction of the old London Bridge and the property was sold to the New River Company.

Moris's water business was the first of the kind started in London, but he had imitators. In 1594 Bevis Bolmar erected a large horse engine at Broken Wharf, near Blackfriars Bridge, to supply the west part of the city with water. The undertaking did not prove a success, and the site was ultimately bought by the New River Company. In 1641 there was a project for bringing water from Rickmansworth. This, however, was not carried out. Maitland speaks of another establishment called the Merchants' Waterworks, which had a windmill in Tottenham Court Field and two other stations—one in St. Martin's and the other in Hartshorn-lane in the Strand—for supplying water from Tyburn.

In the reign of Elizabeth several schemes for the improvement of the water-supply were laid before Lord Burleigh. Of these, one was to bring water from Uxbridge to the north of London. An Act of Parliament was passed in Elizabeth's reign to allow the citizens of London to convey water from Hertfordshire to the city, and ten years were allowed for the completion of the work. Nothing, however, was done. The mayor and corporation of the city of London neglected a great opportunity of supplying the city with good water under their supervision. At that time, however, engineering was not a strong point amongst the members of the corporation, and the undertaking appeared, and actually was indeed, one not to be lightly undertaken. It was reserved for a private citizen, Hugh Myddleton, to carry out the work. On looking through the Records of the Corporation of London two things strike one with regard to the action of the mayor and corporation in all affairs connected with water. The first is that they were always extremely careful to insist on the fact that water for the poor to drink was the first consideration; and, in the second place, it is seen what stringent precautions were taken to punish offenders[3] who took a greater quantity of water than they were entitled to for trade purposes or who stole water from public sources for their own private benefit.

## MUNICIPAL-LONDON, WATER-LONDON, AND POLICE-LONDON.

In the report of the Royal Commission on the London Water Supply the Commissioners found it well first to define the areas affected by the inquiry. The administrative county of London is nearly identical with the area called registration London by the General Register Office, but an area called Greater London by the General Register Office includes the districts within which the Metropolitan and City police have jurisdiction (see Fig. 1). But neither of these areas coincides with those supplied by the London water companies. The administrative county of London has an area of 121 square miles, but registration London does not include the hamlet of Penge, and Greater London of the General Register Office includes all parishes wholly situated within a circle of fifteen miles radius from Charing-cross, and all other parishes of which any part is included within a circle of twelve miles radius from Charing-cross. The total area is 701 square miles. The Commissioners in taking evidence gave the name Outer Ring to the area within Greater London and outside the county of London. This is the part which at the present time has the most rapidly increasing population.

The metropolitan water companies are eight in number; the area they supply does not coincide exactly with either of the areas mentioned. The districts supplied by these companies and the districts over which the companies have Parliamentary powers of supply are called Water London. The area includes the whole of the County of London and part, but not all, of the Outer Ring. It extends, however, beyond it in the north and north-east and in the south-east and south-west. Thus the New River Company's area extends to Ware in Hertfordshire; the East London as far as Romford in Essex; and in the south the Kent Company's area extends to Sundridge and Chevening in Kent; and to the south-west the Lambeth Company's area extends to Esher.

The total area of Water-London is 620 square miles. The Metropolitan water companies are:—The Grand Junction; the West Middlesex; the Chelsea; the New River; the East London; the Lambeth; the Southwark and Vauxhall; and the Kent. In some cases the Parliamentary districts of the water companies overlap one another—i.e., more than one company has a right by its Act of Parliament to supply a given district. In some cases where this has happened the

[3] The City records contain an account of how a resident in Fleet-street succeeded for a time in stealing water and the punishment that was meted out to him. On Nov. 12th, 1478, William Campion of Fleet-street was convicted of having tapped the conduit where it passed his house and conveying the water into his well, "thereby occasioning a lack of water to the inhabitants." The culprit was taken before the Lord Mayor and aldermen and punished in a rather striking manner. He was placed on horseback with a vessel like a conduit on his head and this filled with water which ran out of small pipes over him while he rode round all the conduits in the city.

FIG. 1.

The administrative County of London is the shaded area. The black line defines the Metropolitan water-supply. The shaded line defines the Metropolitan and City police.

FIG. 2.

The outlines define the areas supplied by the eight different companies. The small shaded area is supplied by the Chelsea Company and the Southwark and Vauxhall Company also.

companies themselves by private arrangements have settled their boundaries to their mutual satisfaction. There are instances in which small areas are still supplied by more than one company. Within the Parliamentary districts of supply of some of the companies water is supplied by other public authorities. There are also private water supplies in London, and not only in London, but throughout the district generally.

THE AREAS SUPPLIED BY THE EIGHT WATER COMPANIES.

Figure 2 defines the areas supplied by the eight different companies.

*The New River Company* supplies Highgate, Upper Holloway, Kentish Town, Highbury, Stoke Newington, part of Dalston, and the district between these places and the Thames, Hoxton, a great part of the City of London, including the Tower, and all the district along the Thames as far as Charing-cross. At Charing-cross the line of supply goes up Northumberland-avenue, takes in the northern part of Trafalgar-square, then goes in a northerly direction up the Haymarket and Poland-street. The line then extends in a northerly direction up the Tottenham Court-road as far as the High-street in Kentish Town. At the top of Tottenham Court-road the boundary area extends to the north-west to the Small-pox Hospital, Hampstead, then goes in a north-westerly direction to include the Hampstead district. Thus, roughly speaking, the districts supplied are the E.C., W.C., and the parts north of these districts. The company also supplies districts out of the metropolitan area, the total area being 59,520 acres.

*The Chelsea Company* supplies the districts which lie to the north of the Thames from Fulham to Charing-cross—Fulham, Walham-green, Chelsea, Brompton, Knightsbridge, Pimlico, Westminster, and part of St. James's. The northern boundary area of distribution runs from the Crab Tree at Fulham, up Crown-road, Lillie Bridge-road, Richmond-road, the Old Brompton-road, and then goes in a northerly direction to Prince's Gate and along Knightsbridge and Piccadilly to the north-east corner of the Green Park. The boundary then runs down the eastern side of the Green Park—that is, in the south-eastern direction—for about two-thirds its distance, and then passes to the north-east to include St. James's Palace, Carlton-terrace, and the southern part of Trafalgar-square. Here it is in contact with the New River area. The area supplied by the Chelsea Company is 3482 acres.

*The West Middlesex Company* has a less compact area of distribution than the Chelsea, with whose area of distribution it comes in contact from Princes' Gate to the Crab Tree at Fulham. The West Middlesex Company supplies Hammersmith, that part of Fulham now called West Kensington, South Kensington, and Kensington, the northern boundary of this part being the Uxbridge-road. The company supplies also the Regent's Park and Portman-square districts, extending as far south as Oxford street, as far north as Brondesbury, and including the district of St. John's Wood. The area of the West Middlesex Company's water-supply is 17,280 acres.

*The Grand Junction Company* supplies the western suburbs, Shepherd's Bush, Wormwood Scrubs, and the district which is called North Kensington and Bayswater and part of Paddington. The total area supplied by the company is 29,760 acres.

*The East London Water Company* supplies part of Stamford Hill, Upper and Lower Clapton, Homerton, Hackney, Bow, Bromley, Poplar, Limehouse, Stepney, the London Docks, Shadwell, and the Isle of Dogs—that is to say, the parts north of the Thames from St. Katherine's in the east to the outlet of the River Lea, and in the county of Essex West Ham, Walthamstow, Leyton, Woodford, and Loughton. The total area of supply is 50,880 acres.

The area of distribution of the companies to the south of the Thames is not so easy to follow as that of the companies on the north because there is much more overlapping. As we have seen, to the north of the Thames, roughly speaking, the East London Company supplies the part popularly called the East-end, the New River Company the central districts and the parts to the north of them. The Chelsea Company supplies Chelsea and Fulham. In the case of the other two companies the distribution is rather less difficult to define. The Grand Junction has, as it were, a wedge of distribution in the centre of the area of the West Middlesex Company. The companies which supply the districts to the south of the Thames are the Southwark and Vauxhall, the Lambeth, and the Kent. Roughly speaking, the Kent Company supplies the south-east, the Southwark and Vauxhall the south-west, and the parts between these districts—that is, Kennington and Newington—are supplied by the Lambeth and Southwark Companies in common.

*The Southwark and Vauxhall Company* supplies Roehampton, Putney, Wandsworth, Battersea, Clapham, Newington, and Kennington, and part of Brixton is partly supplied by this company and partly by the Lambeth. The area supplied by the Southwark and Vauxhall Company is 19,040 acres.

*The Lambeth Company*, besides partly supplying the districts already mentioned, distributes water to Bermondsey, Rotherhithe, Peckham, and Dulwich. Its area extends through Dulwich, Forest-hill, Sydenham to the Crystal Palace, Anerley, Brockley-hill, Bell-green, and as far to the south as Beckenham. The Kent Company supplies parts of Hatcham in common with this company. The area of distribution is 39,360 acres.

*The Kent Water Company*, as far as its area of distribution is concerned, is the largest of them all; as far as population is concerned it is the least. It supplies parts of the south bank of the Thames, from Limehouse on the West to Woolwich, but its area of distribution includes Plumstead, Shooter's-hill, Blackheath, Eltham, and Southend. The total number of acres covered is 113,280.

## MIDWIVES REGISTRATION BILL.

THE following is the text of the Midwives Registration Bill, now before the House of Commons:—

The chief object of this Bill is to enable the public, and especially such of the poor as are in the habit of employing midwives, to distinguish between those midwives who have been trained and have given evidence of being competent for their duties and those who have not.

This Bill provides that henceforth no woman shall call herself a midwife unless she has been placed on the midwives' register, and that in order to be placed on the register she must produce evidence either—(1) of having undergone a proper training and subsequent examination, or (2) of having (at the time of the passing of the Bill) been in *bonâ fide* practice as a midwife for a specified number of years. It is not proposed to make it illegal for a friendly neighbour to render assistance to a lying-in woman in an emergency.

A system of examination and certification by various voluntary bodies has been established for several years in the chief centres of population. It is proposed to place the duties hitherto undertaken by these voluntary bodies in the hands of a duly constituted Board, acting under State control. It is further proposed to make provision for the efficient regulation and supervision of the practice of midwives under rules approved by the General Medical Council and for the exercise of discipline amongst those who are enrolled upon the Register.

See Reports of Select Committee on Midwives Registration, together with the proceedings of the Committee, Minutes of Evidence, Appendix, and Index, ordered by the House of Commons to be printed June 17th, 1892, and Aug. 8th, 1893.

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Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may for all purposes be cited as the Midwives Registration Act, 1897.

2. In this Act—
   The term "midwife" means a woman who undertakes to attend cases of labour in accordance with the regulations to be laid down under this Act.
   "Midwives register" means a register of midwives kept in pursuance of this Act.
   "Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of this Act.

3.—(1) From and after the *first day of January one thousand eight hundred and ninety* —— no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is registered under this Act, or is specially qualified to act as a midwife unless she be registered under this Act.

(2) Any person who, after the *first day of January, one thousand eight hundred and ninety*——, not being registered under this Act, shall take or use the name of midwife or any other such name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding *five pounds*.

(3) No woman shall be placed on the midwives register until she shall have complied with the rules and regulations to be laid down in pursuance of the terms of this Act.

(4) The certificate of registration under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts in respect of such certificate, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant any medical certificate or any certificate of the cause of death.

4. Any woman who, before the expiration of *two years* from the passing of this Act, claims to be registered under this Act shall be so registered provided she produces evidence satisfactory to the Midwives

Board that at the *passing of this Act* she has either been in *bonâ-fide* practice as a midwife for a period of *two years*, or holds a certificate in midwifery from the Royal College of Physicians of Ireland or from the Obstetrical Society of London, or such other certificate as may be approved by the Board.

5. On the *passing of this Act* a Midwives Board shall be constituted by the General Medical Council and shall consist—

(1) of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, and three by the Incorporated Midwives Institute; and

(2) of six persons to be appointed for terms of *three years* by the Lord President of the Council.

One-third of the elected members of the Board shall annually retire, but shall be eligible for re election after the lapse of one year. The duties of the Midwives Board shall be as follow:

(*a*) To make rules for regulating the conditions of admission to the register and the mode of conducting the qualifying examinations.

(*b*) To appoint examiners.

(*c*) To decide upon the places where, and the times when, examinations shall be held.

(*d*) To frame for approval by the General Medical Council rules regulating the admission to the register of women already in bonâ fide practice as midwives at the passing of this Act.

(*e*) To prepare and publish annually a register of midwives.

(*f*) To frame for approval by the General Medical Council rules for regulating, supervising, and restricting within due limits the practice of midwives.

(*g*) To decide upon the conditions under which a midwife may be suspended from practice.

(*h*) To decide upon the removal from the register of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Midwives Board or for other misconduct and to decide upon the restoration to the register of the name of any midwife so removed.

(*i*) And, generally, to do, subject to the approval of the General Medical Council, any other duty which may be necessary for the due and proper carrying out of the provisions of this Act.

6. There shall be payable by every woman presenting herself for examination or registration such fees as the Midwives Board may, with the approval of the General Medical Council, from time to time determine. All fees paid by midwives or by candidates for examination shall be paid to the Midwives Board. The said board shall devote such fees to the payment of expenses connected with examination and registration and to the general expenses of the Board. Should these fees not equal the expenditure of the Midwives Board, the deficiency shall be supplied from the respective local county funds, in proportion to the number of registered midwives resident in the county.

7. The Midwives Board shall appoint a registrar who shall be charged with the custody of the register, and shall also act as secretary to the Board.

8. A copy of the midwives register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act. Provided always that in the case of any woman whose name does not appear in such copy a certificate under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

9. Every local sanitary authority throughout England and Wales shall, on the *passing of this Act*, appoint its medical officer of health, or other registered medical practitioner or practitioners, as the local supervising authority over midwives in the sanitary district. It shall be the duty of the local supervising authority—

1. To exercise general supervision over all midwives practising within the sanitary district in accordance with the rules to be laid down under the provisions of this Act.
2. To investigate charges of malpractice, negligence, or misconduct on the part of any midwife practising within his district, and if he consider that a *primâ-facie* case is established to report the same to the Midwives Board.
3. To report at once to the Midwives Board the name of any midwife practising in his district convicted of a misdemeanour or felony.
4. To keep a current copy of the midwives register, accessible at all reasonable times for public inspection.
5. To satisfy himself, in the case of any midwife practising or desiring to practise within his district, as to the validity of her claim to be placed on the register.

10. The local supervising authority shall at once report to the Midwives Board the death of any midwife, or any change in the name or address of any midwife in his district, so that the necessary alteration may be made in the register.

11. Any woman who procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding *five pounds*, or to be imprisioned with or without hard labour for any term not exceeding *two months*.

12 Any person appointed to keep the register of midwives wilfully making or causing to be made any falsification in any matter relating to the register of midwives shall be deemed guilty of a misdemeanour and shall be liable to a fine not exceeding *ten pounds*, or to be imprisoned with or without hard labour for any term not exceeding *three months*.

13. Any offences under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts.

The expenses of any prosecution shall be defrayed out of the county fund of the district where the prosecution takes place.

14.—(1) An appeal shall be allowed to the Privy Council should any disagreement arise between the General Medical Council and the Midwives Board respecting the carrying out of the provisions of the Act, or of any of them.

(2) Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

15 Nothing in this Act respecting midwives shall apply to legally qualified medical practitioners.

16. This Act shall not extend to Scotland or Ireland.

# REPORT OF THE LYING-IN WARDS OF THE LIVERPOOL WORKHOUSE HOSPITAL FOR THE YEAR 1895 AND 1896; OR, WORKHOUSE MIDWIVES, THEIR TRAINING AND PRACTICE.

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TWO years ago, in consequence of what I still consider a grave mis-statement made before a Royal Commission, I published the results obtained in the lying-in wards of the Liverpool Workhouse Hospital for twenty-one years.[1] As the midwifery question is still before the profession and the public, and as the practice at this workhouse illustrates many points in dispute, the report for another period of two years, with remarks on the midwifery question from a disinterested observer, may be interesting to readers of THE LANCET.

The total number of confinements were 635. Of these women 221 were married and 414 were single, whilst 309 were primiparæ. A number of these patients, 289, were inmates of the workhouse for some time before being confined, and cleanliness, regular, simple diet, and regular hours were brought to bear upon them; 339 came direct from town in labour, and 7 came from the Lock wards, where they were under treatment for venereal diseases. The maternal deaths within the thirty-one days after confinement were three, and not one of these three had any puerperal trouble. One died from broncho-pneumonia, from which she had been suffering for four days prior to confinement, and she died four days after. A post-mortem examination showed normal pelvic organs and verified the chest disease. The second case was confined in the midst of a spree. She had a rigor the day before, her temperature was 102° F. during her confinement, and she was found to be suffering from acute pulmonary congestion. The labour was accomplished under imminent danger of suffocation, and in spite of medicine, inhalations, stimulants, &c., she died in twenty-four hours from the lung disease. The third case had been in the surgical wards for some time, with head symptoms that pointed to a cerebral tumour without localising it. She was stupid and inert, took her food only when it was given to her, but otherwise took no interest in anything around her. The baby was born, and the recovery proceeded naturally without any febrile symptoms. The condition of stupor gradually deepened, double incontinence and coma supervened, and she died nineteen days after delivery. We could not obtain a post-mortem examination. We have followed all the other cases until they left the workhouse or the thirty-one days of the Registrar-General were fulfilled, and certainly no other of the 635 cases died within that time. These 635 women gave birth to 646 babies—335 males and 311 females, twins eleven times. The presentations were: head, 623; breech, 11; hand, 2; foot, 8; face, 1; cord, 1. The operations consisted in 21 applications of forceps and 4 cases of version, and the complications consisted of 6 cases of hæmorrhage, 1 case of tumour of the brain, 1 of adherent placenta, 3 of retained placenta, and 57 where some increase of temperature took place after delivery.

The class of cases treated in this hospital belong to the lowest stratum of society, and the fact that 43 gave birth to hopelessly dead, and often decomposed, babies shows that neither their health nor their habits tended to uneventful and safe recoveries. The results are as satisfactory as they could possibly be from an obstetrical point of view, and while

[1] Liverpool Medico-Chirurgical Journal, July, 1894.

it is to be regretted that any deaths at all took place none of the deaths were preventible by any amount of obstetrical skill. How have these results been obtained? By a midwife, acting under the control of the medical staff and the lady superintendent of nurses. The present midwife was trained by us nearly twenty years ago, and she in turn helps to train a large number of midwives and monthly nurses every year. Our own nurses have three years' training in medical, surgical, and obstetric nursing, and three months of this period are devoted to obstetric work. They see fifty or sixty labours and conduct personally a dozen or more themselves, so that they leave well qualified to manage a midwifery case in the ordinary "midwife" way. Besides our own nurses we train a large number of nurses for institutions. These come for one year and have only one month in the lying-in wards. They become very useful as monthly nurses as they also are allowed to conduct a few cases, so that they know the practical work and would not be at a loss in any emergency until help arrived.

Nurses that have had eleven months' training in medical and surgical work, and much more those that have had two years and nine months of that work, are far more susceptible of obstetric training than the widows and other lone women who have been crushed out somehow into the cold and have taken to lying-in work as a means of livelihood. At one time we trained a few of these, but the response to the training on their part was very faint, and when their three months had elapsed they were just beginning to have a glimmering of the meaning of our teaching. Just as dentists have some training in common with medical men, I think obstetric nurses or midwives should have a training in general nursing, as they will then not only be more efficient midwives, but will have a choice of kinds of nursing from which to select according to their inclinations and opportunities.

The example of this institution and of other parochial and voluntary maternity charities throughout the country show that the successful and safe attendance of lying-in women presents no practical difficulties. We must have trained obstetric nurses, or midwives, and to be known to the public and recognised by the profession they must be registered. The second desideratum is medical supervision. I do not think the above-mentioned good results would be obtained at the Liverpool Workhouse by the midwife and her nurses if there were not only medical men to *help* them, but to *watch* them and their cases. Any patient showing febrile symptoms beyond that of the most ephemeral kind is removed at once from the lying-in ward, and if two or three cases become feverish one after another, not only are the wards emptied and purified, but the nurses are turned out for a day's holiday and for disinfection. The nurses attend all natural labours without interference, and although the medical staff visit the wards daily they probably never even speak to two-thirds of the inmates who are confined there. As to defining a natural labour we never meet with any difficulty because we never attempt such a silly task. We content ourselves with defining *unnatural labours*, as those where a nurse or midwife has to send for a medical man, and there is no difficulty at all either with us or the nurses in the matter. Hence no midwife should be allowed to practise for gain unless she is trained so as to know at once when a labour becomes unnatural, and because many labours are, or may become, unnatural their practice must be supported and supervised by a medical man appointed for the purpose. The jealousy of the trained and registered midwife that prompts present medical opposition to a safe, practical method of attending the parturient poor is as unreasonable as it has been illogically fomented by agitation.

Both medical men and midwives have their places, and the further we go down amongst the poor the more does the midwife become necessary and the less the medical man is required. The poor women are stronger, their labours are more natural, and less frequently require skilled assistance; but their surroundings are disagreeable and dangerous, and a trained midwife can dispel the disagreeable and dangerous conditions in a way that unskilled women could not do, and in face of which a medical man alone would be helpless. Whilst the lying-in wards of the workhouse hospital could not get on safely for long without the medical staff, I am afraid the medical staff would soon get into difficulties without the midwife and her staff. The one is a complement of the other, and the trouble that vexes and irritates unthinking medical men at the present time is the uncontrolled and untrained midwifery that exists and which should be remedied. By training and control women will have their fair and natural share of, and emoluments from, midwifery work, whilst medical men will occupy a more manly and dignified position in regard to labours amongst the poor than by the drudgery necessitated by personally attending badly paid confinements, where the wear-and-tear, anxiety, and exposure often lead to premature old age, and where the necessity of quickly terminating a case sometimes leads to dangerous or fatal measures being adopted, that the patience and leisure of the midwife would avoid. When medical men recognise that midwives (or whatever the same persons may in future be called) are their helpers and not their opponents a suitable method can soon be devised of training, registering, and allocating to the latter their suitable duties.

## BUBONIC PLAGUE IN INDIA.

WE may say, as it does not appear to be generally known, that Indian medical literature contains a good deal of information regarding past outbreaks of Indian plague from time to time in various parts of that country, described for example, as Pali Plague, Mahamurree. Its first appearance of which there is any full record was in the Provinces of Kutch and Kattywar in the Bombay Presidency in May, 1815. In 1836 there was an extensive and virulent outbreak in Pali, Malwa, and other places, also in Gurhwal, and again in 1852 and 1876 in Gurhwal. The description of the symptoms leaves but little doubt as to the nature of the disease; and it is curious that reference is made in some of these descriptions to the mortality among rats—as in the case of Yunnan in Western China and elsewhere[1]—that was early noticed in the present outbreak of the plague.

There was a very interesting discussion raised by Lord Reay in the House of Lords on Monday last on the subject. The Earl of Onslow, in replying to Lord Reay, quoted the contents of a telegram giving the latest official information concerning the progress of plague. According to this telegram the deaths from all causes in Bombay city for the week ending Feb. 12th were 1835; the deaths returned from plague were 813. Plague had been to some extent checked where first prevalent. Mandvi was now almost free from disease, but the general tendency of plague to extend northwards in Bombay city continued. In Poona there had been an increase from 43 to 47 cases during the week, but the disease was concentrated in certain quarters and so far showed no tendency to spread. One indigenous case had occurred in Poona cantonment. In Karachi there had been 269 cases during the week ending Feb. 12th and no indigenous cases in Sind outside Karachi. The disease was present—chiefly in a sporadic form—at a few other places in India. Calcutta, so far as is known at present, is free from the disease. It is satisfactory to find that the greatest precautions have been taken in all directions, and the amount of energetic work that has been performed in Bombay and elsewhere is remarkable. House-to-house visitation has been established, camps for the accommodation of the population have been opened in various directions, houses have been vacated and demolished or destroyed by fire—as many as thirty-five have been so destroyed in Bombay during the past week—and, in short, everything was being, or had already been, done that appeared necessary or desirable. Extensive powers are given to all district officers under the Epidemic Diseases Act, and the possibilities of extension of the disease to new localities are vigilantly watched.

We may refer our readers, or such of them as have not already perused any account of the discussion in the House of Lords, to the daily papers of the 16th inst. for a full report of what had been done with reference to measures of protective inoculation against bubonic plague. Both Lord Reay and the Earl of Onslow entered very fully into the experimental investigations of Dr. Yersin at Hong-Kong and other parts of China, the further experiments at the Pasteur Institute of France, the valuable remarks of M. Roux, and the researches of Professor Haffkine in India in regard to the discovery and use of a prophylactic serum and the number of inoculations that had already taken place with it in Bombay.

The latest telegram from Bombay (Feb. 10th) states that

since the outbreak of plague in that city there had been 5960 cases and 4581 deaths.

## THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

THE annual general meeting of this society was held at the offices, 12, New-court, Carey-street, Lincoln's-inn, on Tuesday last, Feb. 16th, Dr. Heron (the treasurer) being in the chair.

In recommending the adoption of the fourth annual report and balance-sheet for the year ending Sept. 31st, 1396, Dr Heron said the past year had been a very quiet one for the society and they had had fortunately no serious expenditure to meet. He then went over the items in the statement of accounts, and *à propos* of the legal expenditure remarked that the society owed a debt of gratitude to their solicitors for the skilful way in which these gentlemen had piloted the society through various cases, some of which might have resulted in considerable expense. He pointed out how four years ago the society started with empty coffers with the help of a very few men interested in medical defence, and that at the close of last year they had a balance of unexpended income amounting to £382. The guarantee fund, which was a fund that could be made available in the event of dire emergency and would be only used in such a case, amounted to £1700, and that, added to the balance of income, made a total of over £2000 available for the purposes of the society. This, he thought, was a very satisfactory state of affairs. The council of the society had determined to place some of this surplus money under trust, and Sir William Broadbent and Mr. T. Pickering Pick had kindly consented to act as trustees of the reserve fund. This fund would be started with the purchase of £300 worth of 4 per cent. New Zealand Stock, which would cost the society at its present market value a little over £340. The fund could only be used to meet some exceptional demands upon the funds of the society on the recommendation of the council and with the consent of the trustees. The ordinary income of the society, he stated, was now more than enough to meet the ordinary expenditure.

On the motion of Mr. Spencer Watson the report and balance-sheet were unanimously adopted.

On the motion of the chairman, Mr. Jonathan Hutchinson was re-elected President of the society. Dr. Heron said that one of the most valuable assets of the society was the fact that Mr. Hutchinson's name appeared on the list of the society's officers as its president, for wherever medical literature was studied the name of Jonathan Hutchinson was respected.

The vice-presidents were re-elected, as were also the members of the council, with the following alterations. In the place of the late Mr. James Savage, Sir Hugh Beevor; and in the place of Mr. H. C. C. Shaw, who retires owing to ill-health, Dr. Major Greenwood. Dr. Heron was re-elected treasurer.

In moving the re-election of Dr. Hugh Woods and Mr. A. G. R. Foulerton, the honorary secretaries of the society, the chairman pointed out that these two gentlemen had given a great deal of time and had worked very hard in the service of the society, but that they had hitherto received no substantial remuneration from the society. He thought the medical profession ought to set its face against the vast amount of unpaid work that was done in connexion with it, and that as the affairs of this society were now in a fairly prosperous condition the time was near at hand when not an adequate remuneration, because that the society could not afford, but a substantial remuneration ought to be paid to the secretaries. This, he desired to say, was purely his own personal opinion, made entirely upon his own responsibility, and was in no sense official.

The two honorary secretaries were then unanimously elected, and after a resolution had been passed recommending that each division of the society should hold an annual meeting and furnish a list of the officers elected at that meeting, and an account of any matters that come under their consideration, the meeting closed with a hearty vote of thanks to the chairman.

## THE RUSSIAN CONFERENCE ON SYPHILIS AND VENEREAL DISEASES.

THE Conference on the subject of Syphilis and other Venereal Diseases for which preparations have been carried on for over a twelvemonth was held recently in St. Petersburg. The Conference was organised very much on the same lines as that which met in the same city in the winter of 1892 to deal with the subject of cholera. That is to say, the Government had invited representatives from local authorities throughout the empire, and in addition a large number of experts in the subject under discussion and representatives of universities, hospitals, and other scientific institutions were requested to join in the deliberations of the Conference. The meetings were held in the Medical Department of the Ministry of the Interior and were under the presidency of Dr. Ragozin, the Director of that department. The Conference was opened on Jan. 15th (27th), and morning and evening meetings were held daily until the close of the Conference on Jan. 22nd (Feb. 3rd). The total number of members was considerably over 400.

The opening speech was made by the Minister of the Interior, M. Goremuikin, who stated that his predecessor, M. Durnovo, had taken the first steps towards organising such a congress as long ago as March, 1895. During the interval the Government had been actively collecting statistics and information on the subject of the spread of syphilis in Russia, and their request to the local authorities to coöperate in the matter had led to the collection of a vast quantity of material, which would form the basis of the present discussions. Speeches were also made by Dr Ragozin and Professor Tarnovski. The former stated that the object of the Conference was less to discuss the scientific aspect of venereal diseases than to form a plan of action based on scientific conclusions which should lead to practical results in diminishing the spread of such diseases. Professor Tarnovski briefly reviewed the steps taken in the past by the Government in this direction.

At the subsequent discussions an immense number of resolutions were discussed and carried. As there were over 300 such resolutions it is clear that only a small portion of them can be mentioned in the present report. One large group of conclusions, 17 in number, deal with the prevention of venereal disease in factories and mines and among artisans generally.

Briefly, these resolutions declare the necessity for increased medical and hygienic control over artisans. As their inspection with the avowed object of discovering venereal disease would be likely to meet with opposition it is proposed that a general medical inspection should be made compulsory, that this should be carried out on all new hands engaged in a factory or mine, that it be repeated after every holiday or absence for any length of time, and perhaps, if possible, it might be made periodic at fixed intervals. It is further proposed that hospital treatment be made compulsory, at least during the infectious period, whenever venereal disease appears in an artisan, and that the family of the infected person should be persuaded, by all efforts in the medical officer's power, to submit to inspection. The other resolutions of this group deal with the necessity for the medical and hygienic supervision of fairs and markets, of public baths, workmen's barracks, and similar public institutions.

Papers on the Prevention of Venereal Diseases in the Army and Navy were read by Dr. Sholkofski and Dr. Sukhof. The most important resolutions on the subject were the following. Local conditions and the nature of the service a particular regiment is on appear to be the determining factors in the prevalence of syphilis in the army. The present regulations are well adapted to keep the disease in control, but a few alterations are suggested. Among these is the proposal that in ports and places where troops are stationed the naval or military surgeon should be a constant member of the local medical board, in order that he may have a voice in the general measures for controlling venereal diseases in the district. Medical inspection of the men should be every three weeks instead of every four; special measures should be taken with the individual infected with syphilis, not only while he is in the service, but after he returns home; entertainments, debates, concerts, and so

forth should be more frequent, to provide the men with a counter attraction to the drinking house and brothel. The proposal of the organising committee of the conference, that men who contract syphilis should be compulsorily detained in the services for two years from the date of infection, was unconditionally vetoed by the members of the conference. Special measures are suggested for the control of syphilis among sailors in foreign waters. Among these may be mentioned the proposal that the daily distribution of *vodka* (a Russian spirit distilled from rye) on board ship should be done away with, some slight improvement in the food being substituted for it; and that, further, the serving out of *vodka* as a reward for special services should be done away with.

A special section of the Congress, under the presidency of Professor Kapustin of the University of Kazan, was devoted to the subject of Syphilis in Villages. Twenty-one resolutions embody the conclusions of the conference on this subject. It recognises that the great difficulty in the battle with venereal diseases in the villages lies in the ignorance and low state of culture of the peasantry. It urges the necessity for increased education, and as a special measure proposes the holding of popular lectures by medical men on health questions. In Russian villages venereal diseases are more usually spread by extra-sexual methods than by sexual, and this is the direct result of the ignorance of the peasants in all hygienic matters. All measures to deal with the evil must be such as involve no compulsion. Inspection of every individual is not recommended, but there should be facilities for it if the peasants are willing. Moving bodies of peasants (such as pilgrims, emigrants, and men seeking work) should be able to get free medical aid in all central towns they may pass through, and on railways and steamers. At present the best means of supervising bodies of workmen seeking work in distant parts of the country is, in the opinion of the Congress, not quite clear; but it is extremely undesirable to institute a system of health certificates on giving the labourer his travelling passport or on his return to the village. The reasons which led the conference to formulate this resolution are not as yet published; they will be read with interest when the final report of the conference is issued.

The spread of venereal disease in the village is undoubtedly increased by the return of conscripts from the army and also by the encamping of troops in or near the village; special measures are therefore suggested to deal with this risk, particularly in the way of supervising the men, both while in the service and after they have left it. All temporary measures, such as the sending of "flying squadrons" of medical men and nurses, such as have for some years past been sent through the country to treat eye diseases, are declared to be undesirable in the case of venereal diseases; but in many places when local means are inadequate the Government might provide assistance in various ways. The provision of crèches for children, and the supervision of school children suffering from syphilis are other measures recommended by the conference. A word of warning is uttered as to the need for care in vaccinating infants and adults. It was resolved that the conclusions of the conference in this section be sent to the local authorities throughout the country.

A group of nineteen resolutions deal with the prevention of Syphilis in Towns. They scarcely require individual mention here; they are based on the general principles of instructing the people and providing facilities for treatment. They touch upon the subject of prostitution, but only incidentally, as for this a separate group of resolutions was reserved. An able paper on this subject, and one which led to prolonged discussions, was read by Dr. Sturmer. The conclusions of the conference were to the effect that prostitution is an ineradicable evil. There are practically two classes of prostitutes, the registered and the secret or unacknowledged prostitute. The latter is the most dangerous factor in the spread of venereal diseases. As harsh compulsory measures only defeat their own end it is recommended that the system now in practice in some places should be introduced into all towns. This system combines a secret control of unacknowledged prostitutes with an open control of acknowledged ones. The former have no police tickets nor is their name even known to the police. Other special measures provide for the severe punishment of people who make money by the prostitution of their own wives, daughters, or other relatives, and wards, and for the special protection of all young girls under sixteen. Resolutions also deal fully with the registration of "ticketed" prostitutes, provision for their supervision and free hospital treatment, and a number of other matters in this connexion.

The final meeting of the conference took place on Jan. 22nd (Feb. 3rd). Dr. Ragozin thanked all the members of the Conference for their untiring attendance, which had enabled them to get through an almost unprecedented amount of labour, and which he hoped would lead to valuable practical results. Other speeches were made by Professor Ghé and Professor Kapustin of Kazan and Professor Tarnovski. Votes of thanks followed to the President and others, and Dr. Ragozin declared the Conference closed. In the evening a complimentary dinner was given to Dr. Ragozin by the members of the Conference.

It is too early yet to form a final opinion as to the value of the work done by the Conference. When the full report of the discussions is issued it will probably contain a great quantity of valuable material relating to the prevalence of venereal diseases in Russia and the methods now in practice for dealing with them. The resolutions proposing fresh measures appear to fall into two groups—those which can at once lead to action and those which will require legislation before action can follow. As most of the members of the Congress were members of the local governing authorities of the district they represented the first-named group of resolutions may be expected to at once lead to results; and, judging by the precedent of the Cholera Conference in 1892, it is exceedingly probable that fresh legislation may be anticipated in the near future in accordance with the conclusions of the recent Conference.

## THE LONDON WATER QUESTION.

THE adjourned discussion on Mr. W. J. Dibdin's paper on the Character of the London Water-supply (see THE LANCET, Jan. 23rd, p. 269) was continued at the meeting of the Society of Chemical Industry on the 15th inst.

Mr. BLOUNT re-opened the discussion by congratulating Mr. Dibdin on his method of using the micro-filter. It was a drawback, however, that assumptions had to be made on account of the diameter of the measuring-tube of the micro-filter not being readily known, and he desired to know whether it was not possible to obtain these tubes ready standardised. He suggested that the inevitable "rust and dust" might be due to the wearing of the packing in the joints, and considered that there was not sufficient difference between the "inevitable" suspended matter and the total actually found to cause alarm. He objected to the softening of the water.

Mr. GRANT HOOPER deprecated the method of stating the suspended matter as tons per annum. The quantity was really very small, being only $\frac{1}{2000}$th of a grain per gallon. He wished to know how Mr. Dibdin concluded that 30 per cent. of the samples were objectionable. He thought the Kent Company's water was recognised as a standard of purity, but 18 per cent. of the samples of this water were set down as objectionable. He approved of softening the water, but the cost, which had been declared by the Royal Commission of 1851 to be 27*s.* per million gallons, equalling 10 per cent. of the cost of obtaining the water, seemed prohibitive.

Mr. WM. THORP repeated some of his former criticisms, and specially objected to Mr. Dibdin's way of stating the deposit in tons, as an attempt to make analytical results understandable by laymen (Mr. DIBDIN: Quite so.). He thought it was a similar case to a physician explaining symptoms in a popular manner to a lay audience.

Another gentleman called attention to a method for softening and sterilising potable water reported on favourably by THE LANCET.

Mr. E. J. BEVAN pointed to some inconsistencies between the amount of deposit on the micro-filter and the gravimetric determinations. He thought that the concordance between the physical, chemical, microscopical, and biological results was by no means so striking as Mr. Dibdin made out, and called attention to discrepancies between some of the figures for the nitrogen in the suspended matter and the oxygen absorbed. He considered Mr. Dibdin's paper a splendid—indeed, monumental—piece of work.

Mr. WHITTAKER thought that, on the whole, the water companies had done their best with the supply they were able to obtain. At the same time there were risks, and it would be a great advantage if water could be supplied from a source that did not require constant watching. He spoke

very highly of the softening appliances in use at Southampton. The water dealt with resembles the Kent water and is reduced to six or eight degrees of hardness at a cost of ¼*d.* per 1000 gallons.

Dr. BERNARD DYER admired Mr. Dibdin's micro-filter methods. He regretted that the sample of water had been taken from the mains instead of from the outlets of the filter beds. The consequence was that the results given in Mr. Dibdin's paper and the London County Council report were not comparable with those of the chemists retained by the companies. Dr. Dyer said that what they wanted to find out was whether the water left the filter beds in good condition. It was possible that the large number of organisms found by Mr. Dibdin might be due to multiplication of the few that had escaped the filter beds, and the suspended matter in certain cases might result from the breaking away of the slimy covering of the inside of the pipes.

Mr. GROVES asked questions as to the method of collection of the samples. The amount of suspended matter was of little consequence; it was the nature of the bacteria that was important. The water should have been examined on leaving the filter-beds, as the interior of the pipes was anything but immaculate. He suggested that a large reservoir should be formed higher up the Thames to receive flood-water. This would allow time for the deposit to settle and a small proportion of brine might be added to assist in the destruction of the bacteria.

Dr. RIDEAL considered that the amount of oxygen absorbed was the best means of differentiating between good and bad waters. He had to examine the Kent, Southwark, and Lambeth Companies' waters in his district and found that the waters derived from the Thames absorbed about ten times as much as the Kent Company's water. He considered it most important that the nature of the organisms should be determined by cultivation on agar-agar at blood-heat. There was a marked difference between the colonies yielded by the Thames and Kent water when treated in this manner. All the organisms present in the latter were frequently killed entirely, whilst those from the Thames and Lea waters multiplied at blood heat. He thought that a water should not be considered safe unless 95 per cent. of the nitrogen was present as nitrate.

Dr. MOTT thought that the similarity between the deposit from the filtered and unfiltered water was very serious. The quality of the bacteria present was important and not the quantity. Typhoid infection always came from sewage, and it was essential that the organisms should be stopped by the filter beds. He considered that the proper cleansing of the pipes and cisterns inside the houses was quite as important as attention to the water-supply itself. In Vienna the houses had been thoroughly overhauled when the new water-supply was introduced, and there had been a great decrease in epidemics. He thought that soft water was preferable to hard, especially for gouty people, although hard water was generally purer. In conclusion Dr. Mott highly commended the suggestion of Dr. Rideal that cultivations should be made on agar-agar at blood temperature, and pointed out that Dr. Klein had found considerable quantities of the bacillus coli communis in London water.

In reply Mr. DIBDIN said that he could not find any confirmation of Mr. Burgess's theory that the deposit varied according to the length of main traversed. His early microscopic work showed that large quantities of débris were present, and then quantitative estimations were substituted. As soon as this became known there was a marked and rapid falling off in the quantity of suspended matter. The results from the Welsh rivers were put in for the sake of comparison; five or six samples were taken and they were given for what they were worth. He thought that the softening of London waters was most desirable on the grounds of health, comfort, and economy, and quoted the old saying that lime costs 14*s.* and soap £20 per ton. If London water were softened the difference between Welsh and London water after softening would be *nil.* Although this militated against the contentions of a certain party, he thought that a scientific report should contain the whole truth. Referring to the reports of the analysts to the water companies Mr. Dibdin said that for many years the reports, contained the stereotyped formula, "a few moving organisms," which was subsequently changed to "bacteria." Not a word was said about suspended matter. The strength of a chain was that of its weakest link, and the quality of a water should be judged from the worst results obtained from it and not from the average. Dr. Percy Frankland had stated that the bacteria were in close relation to the suspended matter, yet the reports of the water analysts ignored it, but gave the quantities of carbon and nitrogen, which might be derived from peat, to the third place of decimals. On account of this the companies themselves were not aware of their danger. He had a high opinion of the companies. Far from having a quarrel with them, he thought they did their work well, and when they knew of a danger did their best to cope with it. The examination of the deposit under the microscope was most startling, as great lumps of decaying organic matter, resembling flue from the floor, could be seen. He defended the method of stating deposit in tons as carrying conviction to the lay mind that it existed, whereas decimals would have been poch-poohed. There was no necessity for standardising the micro-filters. As regards the correction for "rust and dust," of which much had been made, he merely assumed in fairness to the companies that this was unavoidable. He was far from being convinced that it was so—in fact, since the report the minimum had diminished. He considered there was no danger to be apprehended from the water-supply so long as the companies worked as well as they were doing now. But there was always a danger of laxity. If the London County Council should in future be the water authority it should have a Local Government Board inspector to keep it up to the mark. In conclusion, he thought that the water from the main gave the average result of the working of all the filter beds. If taken individually nine filter beds might be doing well, whilst one which might be overlooked might have broken down. In addition, there was no check against the filter beds being by-passed altogether. In taking samples from the standpipes the microscopic results were checked by gelatin cultures inoculated on the spot and the two were found to agree perfectly.

A hearty vote of thanks was accorded to Mr. Dibdin for his paper.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7454 births and 4128 deaths were registered during the week ending Feb. 13th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 19·2 to 20·8 per 1000, declined again last week to 19·6. In London the rate was 18·6 per 1000, while it averaged 20·3 in the thirty-two provincial towns. The lowest rates in these towns were 12·5 in Croydon, 12·6 in Cardiff, 13·4 in Gateshead, and 14·2 in Halifax; the highest rates were 23·9 in Manchester, 24·2 in Huddersfield, 25·5 in Liverpool, and 26·2 in Plymouth. The 4128 deaths included 337 which were referred to the principal zymotic diseases, against 367 and 361 in the two preceding weeks; of these, 108 resulted from whooping-cough, 62 from diphtheria, 52 from measles, 49 from diarrhœa, 35 from scarlet fever, 29 from "fever" (principally enteric), and 2 from small-pox. No death from any of these diseases was recorded either in Norwich or in Gateshead; in the other towns they caused the lowest death-rates in Plymouth, Derby, and Huddersfield, and the highest rates in Nottingham, Salford, Bolton, and Oldham. The greatest mortality from measles occurred in Oldham and in Bolton; and from whooping-cough in Swansea, Bristol, Nottingham, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 62 deaths from diphtheria included 37 in London, 4 in Birmingham, and 4 in Liverpool. Two fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. There were 38 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 2, 9, and 21 at the end of the three preceding weeks; 20 new cases were admitted during the week, against 7 and 12 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3050, against 3354, 3311, and 3153 on the three preceding Saturdays; 226 new cases were admitted during the week, against 249, 254, and 245 in the three preceding weeks. The deaths referred to diseases

of the respiratory organs in London, which had been 355 and 404 in the two preceding weeks, declined again last week to 373, and were 93 below the corrected average. The causes of 72, or 1·7 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Liverpool, Birmingham, and Sheffield.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·3 and 26·6 per 1000 in the two preceding weeks, further rose to 28·8 during the week ending Feb. 13th, and exceeded by 9·2 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 21·4 in Leith and 21·5 in Aberdeen, to 33·3 in Glasgow and 40·9 in Perth. The 857 deaths in these towns included 105 which were referred to the principal zymotic diseases, against 81 and 96 in the two preceding weeks; of these, 39 resulted from whooping-cough, 31 from measles, 19 from diarrhœa, 7 from "fever," 5 from scarlet fever, and 4 from diphtheria. These 105 deaths were equal to an annual rate of 3·6 per 1000, which was 2·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased in the three preceding weeks from 26 to 32, further rose last week to 39, of which 27 occurred in Glasgow, 8 in Edinburgh, and 3 in Perth. The deaths from measles, which had been 28 in each of the two preceding weeks, rose to 31 last week, of which 23 were recorded in Glasgow, 4 in Edinburgh, and 3 in Aberdeen. The 7 deaths referred to different forms of "fever" exceeded by 3 the number in the preceding week, and included 4 in Glasgow. The fatal cases of scarlet fever, which had been 5 and 7 in the two preceding weeks, declined again to 5 last week. The 4 deaths from diphtheria were within one of the number recorded in the preceding week, and included 3 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 190 and 229 in the two preceding weeks, further rose to 240 last week, and exceeded by as many as 134 the number in the corresponding period of last year. The causes of 51, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 42·4 and 44·2 per 1000 in the two preceding weeks, declined again to 41·2 during the week ending Feb. 13th. During the past six weeks of the current quarter the death-rate in the city has averaged 40·3 per 1000, the rate during the same period being 19·0 in London and 22·5 in Edinburgh. The 276 deaths registered in Dublin during the week under notice showed a decline of 20 from the number in the preceding week, and included 58 which were referred to the principal zymotic diseases, against 46 and 52 in the two preceding weeks; of these, 26 resulted from measles, 25 from whooping-cough, 3 from "fever," 2 from scarlet fever, 1 from diarrhœa, and 1 from small-pox. These 58 deaths were equal to an annual rate of 3·7 per 1000, the zymotic death-rate during the same period being 1·6 in London and 2·7 in Edinburgh. The fatal cases of measles, which had been 7 and 18 in the two preceding weeks, further rose to 26 last week. The deaths from measles, which had been 27 and 24 in the two preceding weeks, were 25 last week. The 3 deaths referred to "fever" slightly exceeded those recorded in the two preceding weeks, while the 2 fatal cases of scarlet fever showed a further decline from recent weekly numbers. The 276 deaths in Dublin last week included 43 of infants under one year of age, and 62 of persons aged upwards of sixty years; the deaths of infants showed a marked decline, while those of elderly persons slightly exceeded the number in the preceding week. Six inquest cases and 6 deaths from violence were registered; and 77, or more than a fourth, of the deaths occurred in public institutions. The causes of 17, or more than 6 per cent., of the deaths in the city last week were not certified.

## THE SERVICES.

### ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL W. H. STEELE is about to retire. Surgeon-Major Hunter has been ordered to the Cork District for duty, and Surgeon-Captain A. W. Bewley has been ordered to join at Dublin. Surgeon-Colonel J. P. Rooney has been appointed P.M.O., Scottish District. Surgeon-Major A. H. Burlton will shortly assume medical charge at Dover. Surgeon-Major B. T. McCreery has assumed charge of the troops at Newry. Surgeon-Major E. Butt has proceeded from Newry to Dundalk. Surgeon-Major J. M. Irwin has assumed medical charge of the Station Hospital at Brighton. Surgeon-Major G. H. Sylvester has assumed medical charge of women and children, Stanhope Lines, Aldershot.

The under-mentioned Surgeon-Majors to be Surgeon-Lieutenant-Colonels:—Michael R. Ryan, M.D., Edward O. Reynolds, Henry J. Robbins, M.D., John J. Morris, M.D., Aylmer E. Hayes, D.S.O., John F. Williamson, M.B., John T. Carey, M.B., William J. R. Rainsford, F.R.C.S. Irel., Isaac Boulger, Thomas Boyd, Percy H. Johnston, M.D., Isaac B. Emerson, Eugenius A. Roche, Ulick J. Bourke, Joseph J. Lamprey, William H. Allen, Jones L. Peyton, M.B., Arthur W. Carleton, M.B., F.R.C.S. Irel., George A. Hughes, M.B., Brisbane W. Somerville-Large, F.R.C.S. Edin., Phineas B. Tuthill, M.D., F.R.C.S. Irel., and John P. Hunt, M.D., F.R.C.S. Irel. Surgeon-Captain James R. Forrest to be Surgeon-Major. The under-mentioned Surgeons on probation to be Surgeon-Lieutenants:—George Elliott Frank Stammers, Charles Frederick Wanhill, Wilfrid Edward Hudleston, Martin Percy Corkery, Frederick John Gaine, Leonard Adams Williams, Ernest William Bliss, Malcom MacGregor Rattray, M.B., John Henry Power, Richard Edward Game Phillips, Thomas Henry Matthews Clarke, M.B., and Edwin Walter P. V. Marriott.—*London Gazette.*

### INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain Parry, A.M.S., on return from leave in England, has been posted to general duty, Aden District. Surgeon-Lieutenant Walker, A.M.S., on arrival from England, has been posted to general duty, Quetta District. The services of the under-mentioned officers (Bengal) are placed temporarily at the disposal of the Government of the Punjab:—Surgeon-Captain R. Heard and Surgeon-Lieutenant C. J. Milne. Honorary Surgeon T. H. Hendley, C.I.E. (Brigade-Surgeon-Lieutenant-Colonel), has been appointed Surgeon-Lieutenant-Colonel of the Bombay, Baroda, and Central India Railway Volunteer Rifle Corps. Surgeon-Lieutenant John Muspratt Comley has been promoted Surgeon-Captain of the Cossipore Artillery Volunteers. The following promotion is made, subject to Her Majesty's approval:—*Bengal Establishment:* To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel Charles Henry Joubert, M.B., vice Brigade-Surgeon-Lieutenant-Colonel G. Massy, retired.

### NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeon Alfred Page to the *Brisk*. Surgeons: Albert X. Lavertine to the *Pembroke*, additional, Robley H. J. Browne to R.N. Depôt, Walmer, and W. E. Marshall to the *Duke of Wellington*.

### VOLUNTEER CORPS.

*Rifle:* 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment): William Henry Russell Forsbrook, M.D., to be Surgeon-Lieutenant. 3rd Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant W. A. Renshaw resigns his commission. 2nd Volunteer Battalion the Royal Sussex Regiment: Honorary Assistant-Surgeon C. L. Evershed resigns his commission. 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders): William Edward Foggie, M.B., to be Surgeon-Lieutenant. 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders): Edward Ley Paton, M.B., to be Surgeon-Lieutenant.

### THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned officers of the Volunteer Force:—*North-Eastern District:—Rifle:* 1st Volunteer Battalion the East Yorkshire Regiment: Surgeon-Lieutenant-Colonel Henry Thompson, retired. *Thames District:*

*Artillery:* 1st Kent Volunteer Artillery (Eastern Division, Royal Artillery): Surgeon-Lieutenant-Colonel Robert Ross Brown. *Home District: Rifle:* 3rd Middlesex Volunteer Rifle Corps: Surgeon-Lieutenant-Colonel Frederick Orton. 22nd Middlesex (Central London Rangers) Volunteer Rifle Corps: Surgeon-Major Robert Cuff, retired. 3rd London Volunteer Rifle Corps: Surgeon-Major George Hastings. *Scottish District: Rifle:* 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Lieutenant-Colonel Andrew Dall MacDonald, M.D.

THE HEALTH OF THE BRITISH ARMY IN INDIA.

We are glad to notice that this subject continues to attract attention and is not being lost sight of amid the variety of political and other topics of public interest at the present time. A communication from "Sanitas" in the *Times* of the 16th inst., in reply to one from Mr. Gregory, publishes some facts and figures derived from blue-books which put the question of contagious disease in a very different light to that represented by the opponents of all protective legislation. The figures show, says "Sanitas," that this class of disease rose in India from 371 per 1000 in 1888 to 482 in 1889 and 504 in 1890. "For the years 1889 and 1890 the Army was practically 'unprotected,' but towards the end of 1890 (Parliamentary Return No. 318 of 1895, page 29) new cantonment rules, affording a modified measure of 'protection,' came into force. In 1891 the admission-rate for these diseases fell to 401, and it was only 410 in 1892. In 1893 the new cantonment rules were condemned by a committee (Mr. G. Russell's) at home. The figures of 'contagious disease' for the years 1893, 1894, and 1895 have been 466, 511, and 537 per 1000. (For the last year see Army Medical Department Report for 1895.)."

MEASLES AT DEVONPORT.

Measles in a mild form has broken out on board the *Impregnable* training ship for boys at Devonport. The disease, which is very prevalent in the district, has attacked five boys in the ship, and they have been removed to the Naval Hospital.

Surgeon-Colonel J. Lane Notter, Professor of Hygiene in the Army Medical School, Netley, proceeds to Venice to attend the International Congress on the Plague.

The transport *Dunera* arrived at Southampton on the 12th inst. She brought home thirty-four invalids for the Royal Victoria Hospital, Netley.

# Correspondence.

"Audi alteram partem."

## SURGEON-CAPTAIN HEHIR AND THE PARASITE OF MALARIA.

*To the Editors of* THE LANCET.

SIRS,—In connexion with a long paper by Surgeon-Captain Hehir, given in THE LANCET of Nov. 28th and Dec. 5th, 1896, and entitled "The Hæmatozoon of Malaria and its Discovery in Water and Soil," I feel it my duty to make the following remarks. The paper in question implies not only that the writer has discovered a hæmatozoon in cholera and syphilis, but that he has found new forms of the parasite of malaria and has discovered its existence in water and soil. These discoveries have already been mooted by him in several papers—for example, one on Microscopical Observations on the Hæmatozoon of Malaria, published in 1891, and another on his Cholera Organism, published as a special supplement to the April number of the *Indian Medical Gazette*, 1892. In June, 1893, I called on Surgeon-Captain Hehir with two specimens of malarial blood and persuaded him to give me a demonstration of his malaria parasite. He showed me some examples of his small hyaline bodies; they were the exudation bubbles which escape from blood plates in blood kept for an hour or so. He showed me also examples of his hæmatomonas malariæ stellatum; they were ordinary stellate arrangements of fibrin such as are figured in some text-books of physiology. These facts were publicly referred to and Surgeon-Captain Hehir's conclusions challenged in a paper published by me in the *Indian Medical Gazette*, 1893, page 329; but Surgeon-Captain Hehir has then and since ignored my remarks, though in the same number of the *Gazette* there was an editorial inviting his attention to them. In the same periodical for January, 1894, I gave further a long paper describing various appearances produced by the "third element of the blood" (blood plates) and detailing some of the errors made by Surgeon-Captain Hehir, and in the December number of the same year, as well as in a paper read before the Budapest Conference held at the time, I furnished a list of "pseudo parasites" which had, I thought, deceived many observers, among them Surgeon-Captain Hehir and myself. But Surgeon-Captain Hehir has never that I know of thought fit to refer to any of these strictures. Now, with respect to the hæmatozoon of cholera. In Secunderabad in 1895 having some cases of cholera, I wrote and telegraphed to Surgeon-Captain Hehir inviting him to demonstrate his organism to me (since he was living a few miles away). He replied that he had not time to do so. I wrote again, pointing out that since Mr. Hankin had published a letter (*Indian Medical Gazette*, May, 1895) suggesting that one of Surgeon-Captain Hehir's forms "is nothing but crystals of common salt, others resemble kinds of precipitates, fragments of fibrin, and altered red or white corpuscles," it was incumbent on him to demonstrate his organism to some one, such as myself, familiar with the ordinary appearances of blood. To this letter I received no reply.

Surgeon-Captain Hehir is, of course, not obliged to instruct others; but personally I think that he should have felt himself bound to take a little trouble to demonstrate such very startling discoveries to anyone, even to a person like myself, whom he may have deemed not sufficiently well-informed to understand them. Since he did not do so he cannot complain if I give my opinion of his work very freely, and my opinion is briefly as follows. Surgeon-Captain Hehir's *brochures* on these hæmatozoa of his are so confused that it is almost impossible to understand what he means. For instance, in the article lately published in THE LANCET there are no less than 134 numbered paragraphs, which are generally jumbled together without sequence and in such a manner that paragraphs on staining are abruptly interposed between descriptive paragraphs, while references to future explanations which are never given, and to "larger bodies" and "smaller bodies" and "long and broad varieties" which are never described, leave the intellect of the reader in a state of collapse. At the same time the whole paper is full of learned terms and suggests difficulties of investigations so enormous that I fear no one will be able to confirm Surgeon-Captain Hehir's observations. Nowhere is a plain object plainly described; dimensions are not given; the numbers to be found in a field are not specified; and amount of movement is left indeterminate. Really, those interested in the parasite cannot accept this sort of thing.

When, however, by dint of hard application, we begin to resolve the nebulæ we find only that Surgeon-Captain Hehir still remains a victim of the blood-plate. He says (paragraph 104) that he has discovered "invisible forms of the parasite"; the masses of blood-plates are almost invisible. He says (paragraph 58): "In every instance the more developed the parasite the less distinct and the more transparent and invisible it is." "Where the hæmoglobin is largely dissolved in the plasmotic fluid it gives the appearance of the parasite having been stained." This is an excellent description of a cluster of blood-plates, which accordingly I take to be "in every instance" Surgeon-Captain Hehir's more developed parasites. Again (paragraph 78) he says: "There are also considerable numbers of ciliated spherical bodies, the cilia being long, firm, and pass (ing?) out at right angles abruptly, leaving spaces between each other, in which spaces arise a considerable number of varying sized cyst-like bodies which are set free and become the hyaline spherical body mentioned above." This is a correct description of a unique object which was described by me in "The Third Element of the Blood," being a cluster of invisible blood-plates, or microcytes as I called them, surrounded by long filaments of fibrin (Surgeon-Captain Hehir's cilia) and giving rise to exudation bubbles (Surgeon-Captain Hehir's hyaline bodies) between the fibrin filaments. The description confirms Surgeon-Captain Hehir's demonstration to me of his hyaline bodies, which were the exudation bubbles aforesaid, and renders it unnecessary to criticise further his work (either on malaria, cholera, or syphilis). He has evidently mistaken for a parasite a very ordinary object, but one which is not

generally described in text-books on the blood. In a similar manner he has made mistake after mistake. Blood-plates, fibrin-filaments, clusters of blood-plates (paragraphs 77 to 81) are magnified by his imagination into spores, cilia and flagella, and chlamydospores respectively. Echinoid or hairy corpuscles, so well known, become flagellated red-corpuscles (paragraph 88). There are flagella like silk fibres (paragraph 85). Perinuclear granules of leucocytes have "a nucleus and nucleolus, develop flagella, free themselves, and wander about the field" (paragraph 97). Every part of a parasite, even the framework, is reproductive (paragraph 87). Red corpuscles pair off, fuse their nuclei, and commence sporulation (paragraphs 88 to 91). Flagella disintegrate into micrococcus-like spores (paragraph 105). Fibrin forming a few minutes after the specimen is made becomes "fine flagella appearing in the field in places where nothing had previously been seen" (paragraph 107).

If I have misinterpreted Surgeon-Captain Hehir's descriptions it is entirely owing to the bad manner in which they are written. But I do not think that such misinterpretation is possible, because no other bodies and appearances which in any way resemble those descriptions exist in the blood. Of the large number of able observers who have studied malarial blood not one has even hinted at the existence of such forms. Surgeon-Captain Hehir insists upon the use of high powers and special methods of staining; but other observers have used these without arriving at his results. On the other hand, I really doubt whether he has ever seen the true parasite at all. For example (paragraph 38), he says that "it is often difficult to distinguish red cells from spherical bodies of different kinds, including the spherules which have developed from the unfolding of crescents"; a child could distinguish them. Again (paragraph 76), he says that the red cells (occupied ?) are smaller than the average in the tertian parasite, which is just the opposite of truth, as every beginner knows by this time. He must have been looking at something quite different from what most of us hold to be the parasite of malaria. That a beginner should be misled in this way is credible, but that Surgeon-Captain Hehir should persist in ventilating such matters years after the true nature of his bodies has been exposed (not only by myself, but by Mr. Hankin, and, I think, by others), while at the same time he refuses or omits to answer satisfactorily reasonable criticisms, is becoming a kind of nuisance in medical literature. If he still believes in his discoveries his course is (*a*) to demonstrate to capable persons; (*b*) to publish photographs; and (*c*) to send specimens to impartial experts in Europe. Until his observations are confirmed by others we are, I think, justified in holding that he has been misled by "pseudo-parasites," and that the parasites of malaria and cholera described by him are zoologically impossible and exist only in his imagination. If he pleads that similar things have been said of other discoverers we must reply that they have at least endeavoured to convince others by visual demonstrations and exact descriptions.

I am, Sirs, yours faithfully,
RONALD ROSS, Surgeon-Major, I.M.S.
(Parkes' Memorial Gold Medalist on Malaria).

*** Surgeon-Captain Hehir referred in his paper to illustrations which were to reach us later.—ED. L.

## "HAS THE FISH A MEMORY."

*To the Editors of* THE LANCET.

SIRS,—I have to thank you for quite a number of most interesting letters which were addressed to me in consequence of your article containing my question—Have fish a memory? I see that such studies in comparative psychology interest more people than I believed. Perhaps your readers might take an interest in an address made at the Association of German Physicians and Naturalists, 1896. This address, which was made at the request of the Scientific Committee of the Congress, contains the very essence of my views and forms, as I should say, the prelude to the question you lately were kind enough to insert in your paper.

I am, Sirs, yours truly,
Frankfort-on-the-Main, Jan. 28th, 1897. LUDWIG EDINGER.

*To the Editors of* THE LANCET.

SIRS,—In a book published by Messrs. Cassell in the early seventies, called "The World of Wonders," occurs the following story:—

"When the late Dr. Warwick resided at Durham (*sic*), the seat of the Earl of Stamford and Warrington, he was walking one evening in the park, and came to a pond where fish intended for the table were temporarily kept. He took particular notice of a fine pike, of about six pounds weight, which, when it observed him, darted hastily away. In so doing it struck its head against a tenter-hook in a post (of which there were several in the pond, placed to prevent poaching), and as it afterwards appeared, fractured its skull and turned the optic nerve on one side. The anguish evinced by the animal appeared most horrible. It rushed to the bottom, and boring its head into the mud, whirled itself round with such velocity, that it was almost lost to sight for a short interval. It then plunged about the pond, and at length threw itself completely out of the water on to the bank. The doctor went and examined it, and found that a very small portion of the brain was protruding from the fracture in the skull. He carefully replaced this, and with a small silver toothpick, raised the indented portion of the skull. The fish remained still for a short time, and he then put it again into the pond. It appeared at first a good deal relieved, but in a few minutes it again darted and plunged about until it threw itself out of the water a second time. A second time Dr. Warwick did what he could to relieve it, and again put it into the water. It continued for several times to throw itself out of the pond, and with the assistance of the keeper, the doctor at length made a kind of pillow for the fish, which was then left in the pond to its fate. Upon making his appearance at the pond on the following morning, the pike came towards him to the edge of the water and actually laid its head upon his foot. The doctor thought this most extraordinary; but he examined the fish's skull and found it going on all right. He then walked backwards and forwards along the edge of the pond for some time, and the fish continued to swim up and down, turning whenever he turned; but being blind on the wounded side of its skull, it always appeared agitated when it had that side towards the bank, as it could not then see its benefactor. On the next day he took some young friends down to see the fish, which came to him as before, and at length he actually taught the pike to come to him at his whistle and feed out of his hands. With other persons it continued as shy as fish usually are. Dr. Warwick thought this a most remarkable instance of gratitude in a fish for a benefit received; and as it always came to his whistle it also proved what he had previously disbelieved, that fishes are sensible to sound."

Perhaps this story may interest Professor Edinger.

I am, Sirs, yours faithfully,
CREDAT JUDAEUS.

*To the Editors of* THE LANCET.

SIRS,—From a paragraph in the *Standard* I learn that you are asking for any observations that may have been made having reference to the question as to whether a fish has a memory. I beg to submit the following. A few years ago I kept a small tench in a fish-globe alone and gave it from time to time various articles of food—worms, flies, &c.,—but among all these there was but one thing that raised any excitement in the fish's "mind," and that was the sight of a small worm. This being held at a considerable distance—even so much as six feet—caused a manifest excitement. We used to think it incredible at first that the fish recognised so small an object, but we found upon observation, many times repeated, that the fish was quite well aware of the dainty in store. He would take it greedily from our hand. I cannot conceive but that memory played an important part here. I should have said that the worm was brought from a distance gradually and *not* shown to the fish at first.

I am, Sirs, yours obediently,
Felstead, Jan. 24th, 1897. J. FRENCH.

*** We cannot receive any more communications on this subject. Correspondents are requested to send any facts they may have at their disposal to Professor Edinger, 30, Gärtnerweg, Frankfurt-on-Main.—ED. L.

## THE MIDWIVES BILL, 1897.

*To the Editors of* THE LANCET.

SIRS,—The above Bill was read a first time in the Commons on Feb. 9th and was down for second reading on Friday, 12th. Fortunately, its second reading was not reached. It is truly lamentable that a Bill such as this, which proposes

to establish a new class of midwifery practitioners, should be placed for second reading and not one word of warning be given us in any of the four weekly medical journals. A copy of the Bill can now be had from Eyre and Spottiswoode, East Harding-street, S.E., price 2*d*.

This Bill is, of all its predecessors, the most dangerous, because it attempts to leave out the chief debateable points, handing these over to the proposed "Midwives Board." But as this Board is to consist of practitioners to be elected, three each, by the College of Physicians, College of Surgeons, and Apothecaries' Society, and Midwives Institute, and six by the Lord President of the Privy Council, we can form a fair idea of the composition of such Board. I should like to know if the Colleges and society have agreed to the above, and if not, what is to happen? My hope is that the Colleges and society will refuse to dirty their hands with any so degrading a proposal. Clause 5 (*b*) proposes that the Representatives of the Colleges shall "appoint examiners"—that is, the Colleges shall appoint examiners both under the Medical Acts to *license* medical practitioners, and also examiners to *license* an inferior class of midwifery practitioners, to be known under the misleading name of "midwives." Surely the Colleges and society will never agree to carry on this double plan of down-grade examination, and so establish two classes of *women* licentiates. Another important point is that no provision is made for the payment of the expenses of the eighteen members of this Midwives Board. If Members of the Medical Council are paid, why should not also Members of the Midwives Board? Badly paid public work is always badly done work.

Again, no provision whatever is made for the election of representatives *of the profession* upon this Board. Why? The profession has, for so far, five direct representatives upon the Medical Council. Yet it is refused representation upon this Board. It is not as if *all* diplomates of the Colleges and Society were to be empowered to elect the representatives of the Colleges and Society upon this Board, because such would be elected by the councils of the Colleges. In these respects, therefore, the Bill is glaringly deficient. Clause 5 is worthy of the closest attention. It is to be noticed that the Board is to frame rules "for *approval* by the Medical Council." But if these rules are for "*approval*" only, what is the good of the Medical Council discussing them? Should the words not be for the "approval or otherwise" of the Medical Council?

Another grave flaw in the Bill is, that it refuses to give the Medical Council power to take any part in arranging the plan for *the education* of intending midwives. Clause 5 lays down the *duties of the Board* in Sub-clauses *a*, *b*, *c*, and *e*, while Clause 5, Sub-clauses *d* and *f*, lay down the duties of the Medical Council. By this clause, therefore, the Medical Council is to be empowered (*a*) to constitute the Board; (*b*) "to approve" (!) rules regulating *the admission to the Register of women already in bonâ fide practice*"; and (*c*) to approve (!) rules for "regulating, supervising, and restricting" the practise of midwives. Therefore, neither in Clause 5, nor in any other of the clauses, is the Medical Council given the slightest power to say in what subjects the intending midwife is to be *educated* and in what subjects she is not. This drafting is painfully at variance with the resolution of the Medical Council, November, 1889, which refers specifically and in detail to "*the education*, examination, and discipline which ought to be established." Clause 9 is of interest to medical officers of health, as it proposes every local sanitary authority shall appoint its medical officer of health to act as the "local supervising authority," and it is proposed that he shall (*a*) supervise all midwives practising in his district; (*b*) investigate charges of malpractice, &c.; (*c*) report to the Midwives Board any midwife convicted of misdemeanour; (*d*) keep a correct copy of the Register of Midwives; (*e*) satisfy himself of the right of any midwife to practise; and (*f*) notify the deaths of midwives to the Board. This will be no small work for any local medical officer of health, but when I state that no provision whatsoever is made in the Bill for payment for such services we can see how it is intended the Bill should be administered. I hope every "local" medical officer of health will write to his M.P.'s asking them to oppose the Bill. An important point is that all through the Bill those responsible for it *have persistently* refused to *define the duties* of the midwife—i.e., they refuse to say whether she is to act as a nurse only and under the direct supervision of a medical practitioner or to conduct confinements on her *sole* responsibility. It is proposed to harness the Midwives Board with the defining of her duties and with defining the undefinable word "natural labour." Now until this is done *in the Bill, and in the Bill only*, we must strenuously oppose it.

When the Midwives Bill was before the Medical Council in 1895 it was referred to a committee of the Council. This committee reported against the Bill as follows: "That the word 'midwives' should be struck out of the title of the Bill and out of the several clauses and that the term 'midwifery nurse' be substituted for it." The committee also proposed and agreed that instead of the midwife being empowered to attend natural labours without the supervision of a medical practitioner the Bill should empower her, "but not to discharge any other duties than those of a midwifery nurse." When this committee report came up before the Council the motion that the words "midwifery nurse" be substituted for the word "midwife" was defeated by only 14 votes to 12. Again, when it was moved by Dr. McVail and seconded by Dr. P. H. Watson that the duties of the midwife shall be to attend natural labours under the direct supervision of a registered medical practitioner this was lost, on a vote, by 14 to 9, no less than seven members present, being so undecided, refusing to vote. Does this look like unanimity of the Medical Council in supporting this society craze to repeal the Medical Act, 1886, and to supply the poor—and, mark this, the poor only—with an inferior grade of midwifery practitioners?

The lessons taught by the late election of Direct Representatives to the Medical Council; the insult offered to the profession in Liverpool when the medical staff of the lying-in hospital was discharged and a midwife placed over them; the action of the Leicester board of guardians in appointing a midwife to take the place of their district medical officer; the action of the Peterborough guardians in petitioning every Poor-law authority to obtain power to discharge their district medical officers, and to appoint midwives in their stead to conduct all confinements; the fact that the Midwives Bill of 1890 proposed to empower midwives to attend *all kinds* of labours and to use instruments; the fact that subsequent Bills proposed to confine the midwife to attending "natural labours," and at the same time persistently shrank from giving a definition of "natural labour"; and the fact that those responsible for this impossible Bill now hope to get over all their difficulties by referring them to a Midwives Board, only proves the truth of Lord Cranbrook's reply when, in March, 1891, he said to a deputation in favour of the Bill: It is "an impossible Bill and one which would not meet the merits of the case." To-day is the day of faddists. How can this Bill be defeated? The Bill is "backed" by the following members of the House of Commons: The Hon. A. de T. Egerton (Knutsford), C E. Schwann (Manchester, North), Sir F. FitzWygram (Fareham, Hants), Skewes-Cox (Kingston, Surrey), H. C. O. Bonsor (Wimbledon, Surrey), C. Fenwick (Wansbeck, Northumberland), Sir J. T. Woodhouse (Huddersfield), C. Harrison (Plymouth), J. Wilson ( ? ), H. R. Graham (St. Pancras), C. Bill (Leek, Staff.), and J. H. Johnstone (Horsham, Sussex). If each practitioner in one or other of the above divisions will write at once to these Members of Parliament asking them to withdraw the Bill as it is strongly opposed by the profession great good will result. Also, if all other practitioners will write their M.P.'s asking them to oppose the Bill, and if they will get their local coroners, county councillors, and local political leaders to write to their M.P.'s, then the Bill will be withdrawn. I would also urge that practitioners resident in Ireland and Scotland do the same. It is said the Bill does not apply to Ireland and Scotland. That is true in theory, but false in fact, because the Midwives Board in England would license midwives to practise in Ireland and Scotland, just as now the medical bodies license practitioners to practise in the Isle of Man. It is to be remembered that there are now eight medical Members of Parliament—viz., Sir W. Foster, Sir Wm. Priestley, Drs. R. Farquharson, G. B. Clark, C. K. Tanner, M. A. MacDonnell, R. Ambrose, and J. A. Fox,—and that as not one of these would put their name to the back of this Bill we can see how our opposition has gained support. In 1890 no less than three medical M.P.'s "backed" the Bills of that year. I believe Sir R. B. Finlay, M.P., and Mr. J. Dillon, M.P., are both of the medical profession. If then practitioners resident in the divisions represented by the above will write to them, and ask them to oppose the Bill, I feel certain a

courteous reply will be given. I would just add there is little good in supposing that Members of Parliament will be guided by what I alone write to them. The Member of Parliament wishes to know, not what I alone say, but what his constitutents want. If the majority of practitioners in *each constituency* in the United Kingdom write to their M.P. to oppose the Bill, then no Bill can pass.

In *1894* eight medical societies and nine branches of the British Medical Association, comprising 3324 practitioners, voted against Registration of Midwives, and only 392 for.

In *1895* the annual meeting of the British Medical Association passed a very strong resolution against the proposal; and in 1896 the Council of the Association resolved:—

"1. The Bill practically abrogates the existing Medical Acts as regards the practise of midwifery. 2. That it is fraught with danger to the public, inasmuch as it contemplates the creation of an inferior order of practitioners to attend upon the poor. 3. That it is unjust to the medical profession, inasmuch as it proposes to register an inferior order of practitioners, instead of a body of well-qualified midwifery nurses.

"Resolved:—That the Council be requested to prepare a petition for presentation to the House of Commons embodying reasons against the Bill."[1]

Mr. F. Fowke informs me Sir W. Foster presented the petition, May, 1896. In an editorial in THE LANCET[2] reference is made to a midwife who operated upon an infant, it bleeding to death, and where it is stated:—"Midwives are of great value to a community when it is fully recognised that they are specially *trained nurses* and *nothing more*." I shall be glad to hear from any practitioners willing to do their duty and who have received promises of support.

I am, Sirs, yours truly,

ROBERT R. RENTOUL.

Hartington-road, Liverpool, Feb. 14th, 1897.

## MR. LOCH AND THE ABUSE OF HOSPITALS.

*To the Editors of* THE LANCET.

SIRS,—I feel confident that the thousands and tens of thousands interested in the welfare and progress of our hospitals—everyone working for them without fee or reward, as well as those receiving for their services far less than a living wage—and the millions of people too poor to pay for help in sickness, or in consequence of accidental injury, in all parts of the world, will join in begging Mr. Loch and his friends to abstain from further interference with regard to the so-called "abuses" of hospitals and other medical charities during this one year—1897—only. In 1898 we may fully discuss and, I hope, finally settle many of the important and interesting questions again brought forward in his letter to the *Times* of Feb. 12th, 1897, and in other communications with greater freedom and at more leisure than is at this time possible, without fear of damaging the financial interests of our hospitals and other institutions founded and supported for the benefit of our sick poor, and without any risk of wounding the susceptibilities of those whose love of their hospitals is of life-long duration.

For these and some other reasons I think it better to postpone the observations I desire, with your permission, to bring before the profession with reference to the highly important and enormously complicated question of the best means of restoring to health in the shortest time people suffering from sudden, acute, or chronic maladies, who cannot possibly afford to pay for medical services and provide for the expenditure consequent upon inability to work. Many of my medical friends will, I am sure, gladly assist in the consideration of matters of such consequence, and as by that time I shall have completed fifty years of active and almost continuous hospital work I may also be permitted, without being accused of presumption, to bring before the profession some of the views I have been led to form, which differ in many respects from those entertained by Mr. Loch, and persistently advocated by him for many years.

If, however, the organising enthusiasm of Mr. Loch and his friends renders a year's rest from their labours unbearable I venture to recommend during the interim an inquiry into a matter which might be undertaken with advantage, and which bears in some degree upon the causes of the complaints of practitioners in certain neighbourhoods who think that their interests have been seriously affected by the increasing popularity of the out-patient departments of our hospitals, though it seems probable that other circumstances have been operating at the same time and perhaps in greater degree to bring about the state of things which all of us so much regret. Among these must be included the fact of the enormous number of new remedies which have been introduced during the last few years, and new methods of treatment which are continually being pressed upon us. Medicines in the inviting form of tabloids, warranted to cure all sorts of ailments, have been brought into public notice in all possible ways and at vast expense. Now it would be of great service to the public, the profession, and to the poor if the most useful and the many worthless among these could be pointed out. Many have come to us from America and many from Germany; not a few have been found by some of us who have tried them to be of little use, and some positively inert; while a few coming, I think, from France, though, perhaps, made elsewhere, are too violent in their action, and some are uncertain. We desire very much to ascertain the truth with regard to the beneficial action or otherwise of many of these medicines with which we are inundated and which are too numerous to remember. Here, then, is an inquiry useful to the public and the profession, and, at the same time, offering a wide field for the labours of those skilled in financial educational and statistical investigations of much importance in reference to hospital management and finance, for the cheapness of many of these medicines is, indeed, remarkable, and the small space they occupy would enable those skilled in organisation to establish small dispensaries everywhere for sale to the necessitous poor at a very cheap rate—say, a halfpenny for twelve doses and a halfpenny for the advice given. In time the dispensaries would become self-supporting, the out-patient departments of our hospitals would suffer in popularity, and ere long the great desire of Mr. Burdett—the extinction of the present system of treating multitudes of out-patients in our hospitals—would be gratified.

I am, Sirs, your obedient servant,

Feb. 15th, 1897. LIONEL S. BEALE.

## "SHOULD EPILEPTICS MARRY?"

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Feb. 13th Mr. Thistle asks, "Has Dr. Gowers any special reason for supposing that accidental lesions of the brain are less liable to be transmitted than similar lesions of the eye or the finger, instances of which are so frequently brought under our notice?" My answer is that I have no reason to believe it, but that no instance of the two examples he mentions has ever come under my notice directly or indirectly. Since it is the opinion of some of those who have given most attention to the subject that such transmission never occurs, Mr. Thistle should certainly publish some of the instances that so frequently come under his notice. An interesting letter appears in the last number of *Nature*, mentioning that Dr. Pritchard long ago anticipated very definitely the recent conclusions of Galton and Weissmann that such transmission of acquired characters does not occur.

I am, Sirs, yours faithfully,

W. R. GOWERS.

Queen Anne-street, London, W., Feb. 15th, 1897.

## THE POSITION OF THE AURICULO-VENTRICULAR CUSPS DURING SYSTOLE.

*To the Editors of* THE LANCET.

SIRS,—I have for some fifteen years been wondering why the theory attributed to Parchappe as to the action of the auriculo-ventricular valves is not taught in England, and during the last few weeks I have several times been made aware that it is generally unknown in this country. Now, since it explains cardiac sounds which are otherwise difficult to understand, and has been accepted by such men as Burdach, Purkinje, and more recently by Malherbe and Fossion, who have developed it, and J. Beclard, who admits it in the seventh edition of his "Physiology" (1880), surely it is time that every practitioner considered it. Marc Sée, in his "Researches on the Anatomy and Physiology of the Heart" (Paris, 1875), still further elaborates it, saying that the effect of the contraction of the musculi papillares, which takes place at the same time as that of the muscular walls of the

[1] See Brit. Med. Jour., May 2nd, 1896, p. 1117.
[2] THE LANCET, Jan. 23rd, 1897, p. 225.

ventricle, is to stretch the chordæ tendineæ and pull down the auriculo-ventricular curtains, and this in spite of the shortening of the longitudinal diameter of the ventricle admitted by most writers. The musculi papillares of the left ventricle are placed in such a way that they fit into one another and fill up the left part of the ventricular cavity. In contracting they pull the two flaps of the mitral to the left, applying them one against the other and against the wall of the ventricle. In the right ventricle the papillary muscles apply the flaps of the tricuspid to the surface of the partition. Without comment, which is unnecessary, I will ask you kindly to insert this in an early issue of your widely-read journal, and oblige,

Yours faithfully,

Inverness-gardens, W. G. COCKBURN SMITH.

## "AN UNUSUAL RESULT OF ABORTION."

*To the Editors of* THE LANCET.

SIRS,—Dr. Purslow's case of abortion, in which the fœtus was embedded in the unruptured amnion only, is interesting from its rarity. This peculiar result (brought about by the rupture of the external membranes and of the funis at the site of its attachment to the placenta) has been observed and recorded on several occasions. A similar case will be found in the Obstetrical Transactions, vol. xxxiii., p. 462, recorded by the late Dr. Graily Hewitt, with an excellent drawing by Mr. Lawrence, the Curator of University College Museum; also a reference to a case by Dr. Herman and by Smellie. Dr. Winckel has also published an observation of the same kind, with a drawing, in his Text-book of Midwifery.

I am, Sirs, yours faithfully,

Mansfield-street, W., Feb. 12th, 1897. HERBERT R. SPENCER.

## "THE GLANDULAR FEVER OF CHILDHOOD."

*To the Editors of* THE LANCET.

SIRS,—Having had five of my children ill with the above fever I read with interest Dr. Dawson Williams's paper on the subject in THE LANCET of Jan. 16th. I will not go over the ground already traversed by Dr. Williams, as I can endorse most of what he says. I do not, however, find that either the author or those who have written since the date of the paper refer to a complication which occurred in four out of five of my own cases—namely, epistaxis. The youngest child, aged three and a half years, bled from the nose one night to such an extent as to seriously imperil life, and the others bled pretty freely. I also observed that although the fever rose in two of the cases to 104° F. there was neither delirium nor vomiting. When convalescence fairly set in the appetite was voracious, and the recovery has in all cases been complete. It is worthy of note that the first case occurred during a visit to an obscure part of South Wales. A word as to treatment. The severe pain in the neck was relieved by lint smeared with extract of belladonna and glycerine. When this failed lint soaked with tincture of opium and water (1 to 4) and covered with oiled silk always eased the pain. The only drug which appeared to be of any avail was salicin in from three-grain to five-grain doses every four hours. One grain of calomel occasionally, always did good. Grapes were given freely when the pain in the neck allowed of swallowing, and, if anything, they relieved the abdominal pain.

I am, Sirs, yours truly,

Weymouth-street, W., Feb. 10th, 1897. CHAS. W. CHAPMAN.

## ANTI-VIVISECTIONIST TACTICS.

*To the Editors of* THE LANCET.

SIRS,—The death of the great specialist, Sir Spencer Wells, who certainly did not attain his unrivalled skill as an operator—a skill which has prolonged life and restored health in innumerable cases—without resort to vivisection, seems a fitting opportunity for calling attention to the renewal of the unscrupulous attempts of the anti-vivisectionists to blast the reputation of the medical profession and to ruin the hospitals. Twice within the past month I have been called upon—once by a man, apparently a paid agent, and once by two young ladies, who have probably allowed sentiment to obscure reason, canvassing from house to house for signatures to a petition insidiously represented as "for securing kindness to animals," but which is only the old anti-vivisection petition accompanied by literature of exaggerated virulence. I enclose the leaflet left by the canvassers and ask whether something ought not to be done to check this wholesale slanderous vituperation?

I am, Sirs, yours truly,

Feb. 9th, 1897. A. W. BUCKLAND.

## CASE OF DERMATITIS DUE TO WEARING A FUR COLLARETTE.

*To the Editors of* THE LANCET.

SIRS,—As some attention is being drawn to the eruption caused by fur the following case may be of interest. A young woman, who had never been subject to eczema, consulted me in November last as to a rash on her neck. The eruption was about two inches broad, extending, but for a few inches in front completely round the neck and even on to the lower part of the cheeks. There was less behind than at the sides, the eruption being particularly marked on the thin skin over and just posterior to the sterno-mastoids. It consisted of fine discrete papules, intensely irritable, scattered more closely toward the centre, and fading off toward the edge of the eruptive band. It appeared that the woman had recently purchased a fur collarette, and on this lay my suspicions. I requested her to desist from wearing it till it had been subjected to steam cleaning, as I thought then that the eruption was caused by some poisonous dressing. The fur was accordingly steamed and afterwards worn; but the eruption showing no signs of abatement I obtained a piece of the fur in order to make a minute examination of the hairs. I found that the fur was composed for the most part of short, even-lengthed hairs of extreme tenuity, but scattered among them were long, bristle-like hairs which seem absent in good young pelts. These hairs split and fracture very easily, the points of such fractured hairs being extremely sharp and almost horny. It is, therefore reasonable to presume that when pressed in contact with the thin skin of the neck the bristly hairs penetrating the cutis break off and thus give rise to the eruption. I venture to send you a specimen of the fur and a few bristles mounted for the microscope to demonstrate the fractured ends.

I am, Sirs, yours faithfully,

Kensington, W. E. A. B.

*** We may point out that the above conclusions of our correspondent are similar to those we published in the columns of THE LANCET a fortnight ago—conclusions which were based on experimental results with a specimen of both an irritating and a non-irritating fur collarette. At the same time we established the absence of chemical irritants.—ED. L.

## THE CANTONMENT AT QUETTA.

(FROM A CORRESPONDENT.)

WHETHER the poison which causes enteric fever and other allied affections be animal, vegetable, or mineral, and whether its habitat be aquatic, aerial, or telluric, the importance of a clean wholesome site for a dwelling must be admitted by all theorists. No conscientious builder would construct a house over an unemptied cess-pit, and yet this is precisely what was done when the present cantonment at Quetta was founded.

During the last war in Southern Afghanistan a great camp grew up by degrees round a remarkable tumulus-like mound known as the "Miri," which is situated in the centre of a spacious alluvial plane at the northern outlet of the Bolan pass. From time immemorial the site had been the regular halting-place for caravans between Kandahar and India, and it is no exaggeration to say that the subsoil was everywhere saturated with noxious organic matter. That, under the circumstances, the troops and followers should suffer severely from diarrhœa, dysentery, enteric fever, and pneumonia was

a foregone conclusion; but happily—thanks to the magnificent climate, and thanks also, no doubt, to a careful supervision of the water-supply—the mortality, though high, was not so great as might have been expected.

Kandahar having been abandoned in the spring of 1881, the breaking up of the Southern Afghanistan Field Force followed soon afterwards; whereupon the question of a fresh site for the headquarters of the newly-formed Quetta District was immediately raised by the recently appointed principal medical officer. Fully imbued with the hygienic gravity of the situation, this official lost no opportunity of impressing upon the authorities, military as well as medical, the overwhelming advantages of a virgin soil for the new cantonment. To his mind complete removal from a site contaminated by the filth of centuries was an obvious necessity, and he accordingly begged leave to point out two fresh sites in the neighbourhood of the ancient halting-ground which seemed to him to be suitable in every respect. In consequence of these representations a special committee was appointed to inquire into the matter, and after due inspection and deliberation the selected spots were both declared to be at least as free as the old foul site itself was from strategical defects and military objections. The sanitary faults of the existing camp being so self-evident the principal medical officer felt sure his condemnation would be endorsed by the executive in India, but month after month passed without a sign, and at last, when the year (1881) closed in leaving the question still in abeyance, he began to lose hope. By this time buildings instead of tents had commenced to spring up in every direction, and although it was true that these more or less rude shelters were constructed of sun-dried brick and represented little or no money value still the disheartened sanitarian could not but regard them as so many nails in the coffin of a salubrious Quetta.

The inexorable touchstone of events has long since justified this melancholy prognostication. It cannot be denied that during the last sixteen years all the diseases that are usually associated with a foul subsoil, from cholera downwards, have committed terrible ravages in the Beloochistan outpost, but even now at the eleventh hour it is not too late to apply a remedy. The past, unfortunately, is irrevocable, but it is our duty to safeguard the future as far as possible, and to this end the recommendation of 1881 cannot well be improved upon. Attention has been drawn[1] to a recrudescence of enteric fever at Quetta, but the fact that this fatal disease has become endemic is not to be wondered at. The climate, however, of the whole district is so good that our soldiers ought to be quite as healthy at Quetta as in England. Air, food, and water are all of the best; it is only the soil that is at fault, and manifestly nothing short of a complete change of site can effectually remove this extremely serious blemish.

It is given to many people to be wise after the event, but the first Principal Medical Officer of the Quetta district may be included in the rarer category of those to whom prophecy is permissible because they happen to know. The testimony of the crowded cemetery on that far-off table-land is, unhappily, only too conclusively in favour of the genuineness of his foresight, but, Cassandra-like, he failed to convince those with whom was the power. Should the authorities desire to refresh their memories as to the views held by this officer regarding possible sites for a cantonment on the Quetta plain, they will find them set forth at length in the annual (medical) report of the Quetta district for the year 1881, which was duly forwarded to Simla early in 1882. As this was the first document of the kind which emanated from the command it has doubtless been carefully preserved in the archives of the Government of India.

[1] THE LANCET, Jan. 9th, page 133.

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

### *Manchester Royal Infirmary.*

THE annual meeting of the trustees of the Manchester Royal Infirmary was held on Friday last. In the absence of Mr. E. S. Heywood, chairman of the board, Mr. J. W. Maclure, M.P., presided. The report stated that, as sanctioned by Parliament, the Monsall Fever Hospital was handed over to the Manchester Corporation on Oct. 1st last, "on the payment by them of the sum of £4899 10*s.* 7*d.*" Provision is made for the gratuitous removal and treatment at the hospital of all cases of infectious disease arising at the infirmary or at the convalescent hospital at Cheadle, and the members of the infirmary medical staff are to have facilities for giving clinical instruction within the wards of the hospitals of the Manchester Corporation. A small second operating theatre has been constructed at the infirmary at a cost of £250, which will greatly facilitate the surgical work of the institution. During the year 1896 4534 in-patients, 36,908 out-patients and surgical casualties, and 1135 home-patients have been treated. The total reaches the large number of 42,577, against a total of 41,205 in the previous year, the increase being chiefly in the out-patients. The following sums have been received from the patients who were able and willing to contribute to the cost of their maintenance:—In-patients, £826 16*s.* 1*d.*; out-patients, £73 13*s.* 6*d.*; Convalescent Hospital patients, £133 17*s.* 2*d.* The report states that from the inquiries made by the District Provident Society into the circumstances of all patients living in Manchester, "it has been ascertained that 93 per cent. of the cases visited last year were fit objects of charitable relief." With respect to this statement, a letter signed "Hospital Reform," which appeared in the *Manchester Guardian* of yesterday, may be noted. It says: "A simple calculation shows that no less than 2979 cases were not suitable objects for charitable relief." In the same issue Mr. T. Garrett Horder, referring to a paper read by him in November last before the Manchester Medico-Ethical Society, calls attention to the fact that while 249 out of every 1000 inhabitants of Manchester were registered as out-patients at the Manchester hospitals in 1892, the out-patients at the Oldham hospitals only numbered 33 per 1000 inhabitants; and he says that he thinks this great difference may be accounted for by the fact that at the Oldham Infirmary "there is a Special Admission Committee, whose duty it is to make investigation into the circumstances of people who apply for out-patient medical relief." This seems to show that the tests of the District Provident Society are less stringent than those of the Oldham committee; or is it that the difference is caused by the large number of patients applying at the infirmary who are not resident in Manchester and into whose circumstances therefore no enquiry is made? The income of the Infirmary last year was £22,441; in 1895 it was £22,627. The ordinary expenditure during the year was £17,073—Convalescent Hospital, £5621; Monsall Fever Hospital (nine months to Sept. 30th), £11,624. The cost of wines, spirits, and malt liquors was 1*s.* 4½*d.* per patient. The chairman in moving the adoption of the report, said that after the declaration of the trustees they would continue to maintain the hospital on the present site. It was arranged that there should be a friendly conference between representatives of the trustees and of the Manchester Corporation. The committee had been appointed and, he believed, would meet very shortly. Mr. Fildes said he had attended the meeting as a member of the hospital committee of the Manchester Corporation to express his cordial acknowledgments—in which he was quite well aware his committee would desire to associate themselves—of the exceedingly generous and gracious manner in which the transfer of the Monsall Hospital had been made to the Corporation. One point in connexion with this transfer gave rise to some anxiety when the question was first mooted—namely, the provision for clinical teaching in cases of fever, and it is eminently satisfactory that the Corporation, with the guidance, no doubt, of the medical officer of health, has been sufficiently enlightened to continue to the students of the Owens College Medical School the opportunity of obtaining, with the help of the infirmary medical staff, this essential part of a medical education.

### *Bequests to Medical Charities.*

The will of the late Mr. James Parrott, a Salford engineer, who died on the 5th inst., aged ninety-four, besides giving legacies and annuities to relatives and others, makes the following bequests to Manchester medical charities: the Royal Infirmary, Royal Eye Hospital, St. Mary's Hospital, and Salford Hospital, to each £500; to the Homœopathic Hospital, £500; to the Consumption Hospital, £400; to the Ardwick Dispensary, the Chorlton-on-Medlock Dispensary, the Ear Institution, and the Children's Hospital, Pendlebury, each £200. The United Kingdom Alliance, Manchester

receives £500 and the Vegetarian Society, Manchester, £200. Henshaw's Blind Asylum and the Deaf and Dumb Schools, Old Trafford, each receive £500. Various other bequests are made to philanthropic societies, and to "any hospital within Manchester conducted on total abstinence principles and selected by the trustees within ten years, £1000." The residue is to be held as a trust, to be called "The James Parrott Charity," the income of which is to be applied "in making money grants, or weekly or other periodical allowances, towards the succour, aid, or relief, of poor people inhabiting or dwelling within the boroughs of Manchester and Salford, and the district of South Shore [Blackpool, where he died], especially such poor people as, by reason of sickness, infirmity, or age, are peculiarly objects of charity." The will directs that there shall always be three trustees. The deceased gentleman is said never to have used tobacco, to have been a total abstainer from alcohol for nearly seventy years, and to have been a vegetarian for forty years. He certainly did credit to his regimen, for he was a hale, well-preserved old man, who superintended his engineering works in Salford until he was eighty-eight years old.

Feb. 16th.

## SCOTLAND.

### (FROM OUR OWN CORRESPONDENT.)

*St. Andrews and Dundee.*

THE anticipation that the recent decision of the Privy Council confirming the ordinances issued by the University Commissioners, by which an incorporating union was established between the University of St. Andrews and University College, Dundee, would conclude the long quarrel between these two academic bodies has been promptly dispelled. At a meeting of the University Court, held on the 10th inst., a letter was read from the Duke of Argyll, Chancellor of the University, intimating that he had taken the opinion of counsel on the ordinances, and was advised that an action for reduction would be competent. Thereupon the Court decided by a majority to take no action in connexion with the ordinances regulating the union of the Dundee College with the University and to intimate their willingness to supply any information that may be needed for the purpose of promoting the suggested legal proceedings. This decision practically ignores the finding of the Privy Council and is in direct opposition to an intimation from the University Commissioners declaring that the ordinances are to be carried out without delay. It will be interesting to see how these two august bodies will deal with what looks like an act of open rebellion against authority. In the meantime it appears to be the determination of the Court to proceed without any recognition of the existence of Dundee or of the authoritative decisions in reference to the College and the University. Thus, at the meeting of the court at which the decision above alluded to was taken the minutes of a committee appointed to make arrangements for the erection of new buildings for a medical school in St. Andrews were adopted, whereas in the scheme of union the medical school of the University was practically to be the college and hospital at Dundee. It is right to add that in this policy the court is by no means unanimous, and the last decision was only carried by the casting vote of the chairman, the Marquis of Bute. The minority includes such influential names as those of Principal Donaldson and Professor Stewart.

*Post-graduate Teaching in Glasgow.*

It is intimated that Professor Coats is during March and April to conduct two post-graduate courses in the Pathological Institute of the Western Infirmary, one in bacteriology and the other in practical pathology. Each course is to commence on March 4th, and the two may be taken together or separately. The clinical demonstrations to medical practitioners, which were commenced some weeks ago in the Royal Infirmary, have been highly successful. A large and increasing number of practitioners are attending the demonstrations and much satisfaction is expressed at their thoroughly useful and practical character.

*Provincial Hospitals.*

The annual meeting of subscribers to the Ayr County Hospital was held on the 15th inst. The general condition of the hospital was reported to be satisfactory, but, as in most cases, the income falls below the expenditure. It is proposed to try to raise a sum of money in connexion with the "Diamond Jubilee" for the purpose of removing the debt of £800 and to increase the endowment of the hospital. By the will of the late Provost Alexander of Coatbridge a sum of £30,000 has been placed in the hands of trustees to erect a hospital more particularly for the treatment of patients injured by accidents occurring in the numerous ironworks in the neighbourhood. The erection of the hospital is to be proceeded with immediately.

Feb. 16th.

## IRELAND.

### (FROM OUR OWN CORRESPONDENTS.)

*The Health of Dublin.*

SOME excitement has been caused here by the leading articles and letters which have recently appeared in the daily journals in reference to the high death-rate which now exists in Dublin. In a leading article on the 10th inst. the *Freeman's Journal*, while repudiating the attitude of an alarmist, maintains that the Dublin death-rate since the beginning of 1897 has been so high as to warrant even more stringent comment than it has actually called forth, and while disclaiming any wish to apportion blame to any public body of staff of officials, the writer fails to see how this important matter can be overlooked. He states that during the first five weeks of the present year the Dublin death-rate averaged 40·1, and was therefore 6·2 above the mean rate for the corresponding period of the past ten years. Every credit is given to the superintendent officer of health and his staff for the fair record which the city returns show for the six years ending with last year, the mean death-rate from zymotic disease in Dublin being for that period decidedly satisfactory and under that of the thirty-three great towns of England, including London. The death-rate, moreover, for the year 1896 was especially favourable. The gravity of the present epidemics and the high mortality now prevailing in Dublin are, on the other hand, prominently noted. Professor Roche's letters and comments have indeed served to draw from Sir Charles Cameron, the superintendent officer of health, full notice, and his reply to all faultfinders is about to take the shape of a communication to the Royal Academy of Medicine in Ireland. It is entitled, "The Recent Failure of Hospital Accommodation in Dublin," and will be read at the meeting of the Section of State Medicine on the evening of the 19th.

*The New Belfast Hospital and the Railway Companies.*

At a special meeting of the County Down Railway Company, held last week, £1000 were voted to the new Belfast Hospital; but at the meeting of the Northern Counties Railway the chairman announced that the directors, in face of threatened opposition, felt it would not be judicious to put the resolution authorising them to subscribe £1000 towards the erection of the proposed new hospital. It seems that such a proposition can only be carried out by the unanimous vote of the shareholders, and one of them had intimated that he would oppose a grant to any charitable institution. The resolution authorising the directors to give the grant to the new hospital was, notwithstanding what the chairman said, moved and seconded and put to the meeting, and passed by a large majority, but the chairman said it was not a motion the directors would be justified in putting into effect. It was, he said, impossible to carry out the views of the large majority, having regard to the opposition that had been evidenced in the meeting.

*Death of Mr. John Dundee, L.R.C.P. & S. Edin.*

I regret to announce the death of Mr. John Dundee, who was for several years dispensary medical officer of Carnmoney, near Belfast. Mr. Dundee, who was educated at Queen's College, Belfast, became a Licentiate of the Royal Colleges of Surgeons and Physicians of Edinburgh in 1869. In 1882 he succeeded his father, who was the original dispensary medical officer of Carnmoney, appointed by the Local Government Board, and he discharged the duties of the office most satisfactorily until three years ago, when he contracted influenza, and continued to work on until symptoms of his fatal malady — phthisis — developed, which compelled him in 1895 to resign his appointment. He went abroad for his health last year, but

was too weak to travel this season. He gradually got lower and died on Feb. 14th at his residence, Hillmount, Carnmoney, County Antrim, and was buried on Feb. 16th, a very large concourse of his former patients and friends being present. Mr. John Dundee was very greatly respected in his district. Naturally of a retiring disposition, he was most attentive to his patients, and it was probably owing to his extreme conscientiousness in looking after the poor in his locality that he contracted the disease which led to his untimely death. His brother, Dr. Isaac Dundee, was appointed dispensary medical officer in his place in August, 1895.

Feb. 15th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

*Marseilles and the Plague.*

THE Municipal Council at Marseilles has begun to understand that it is a difficult matter to make strict hygienic regulations which shall not interfere with the interests of one class or another. At the first announcement of the outbreak of plague in the East there was some fear of street rioting if any infected merchandise should enter the port of Marseilles. Later, however, the inhabitants began to perceive that their commerce would suffer. They learned from the daily press that Europeans had but little to fear from the epidemic as a contagious disorder, that the bacillus plague was easy to destroy, and that the arrangements for disinfection organised at Marseilles were working admirably. Then they began to be less terrified, and though no one cared to avow the sentiment publicly complaints were generally made about the interference with trade resulting from quarantine. The mayor asked for a relief fund of 20,000 fr. for the water-side labourers who had lost their ordinary work of unloading cargo from the East, and the Municipal Council also asked that the decree prohibiting the entry of any merchandise into France except that coming by an ocean or Channel port should be altered, and that no French port should be allowed to receive merchandise from any source, so that other ports should not be favoured at the expense of Marseilles. The Prefect refused to accept this proposition. The town of Marseilles also demanded a special delegate to the Venice Conference, and has even nominated him in advance.

*The Evasion of Quarantine.*

The first application under the law concerning false declarations has been made at Algiers in the case of the captain of the *City of Edinburgh*, who arrived at Algiers saying that he came from Port Said. He declared upon oath and in writing that he had not come from any infected Indian town, but it has been proved that he came from Karachi and had undergone disinfection at Port Said.

*The late Dr. Bourgoin.*

We have to regret the death of Dr. Bourgoin, which took place this week. He was Professor at the École Supérieure de Pharmacie and had been formerly attached to the Faculty of Medicine. He was a member of the Academy of Medicine and had written many classical works, notably on Galenical Pharmacy. Three years ago he was elected Deputy for the Ardennes, and it was expected by the profession that he would champion the cause of medical science in the Chamber; but upon a vote being proposed for the sum of 140,000 fr. to meet the expenses of biological laboratories he, with one other Deputy—also a medical man—were the only two found in opposition to the grant.

*The Paris Medical Societies.*

At the Academy of Medicine the question of corsets has been to the fore. M. Laborde opened the discussion and illustrated his remarks by x ray photographs and the exhibition of a hygienic corset. M. Lucas-Championnière, however, said that the corset in question was nothing but an abdominal belt, and condemned it on the grounds that its constant use enfeebled the muscles of the abdominal wall. At the Surgical Society an interesting discussion has taken place lately on the surgery of the lung and the means of avoiding pneumothorax when it is necessary to open the pleura. M. Tuffier and M. Hallion have made some experiments upon animals. They propose to use a tube inserted into the trachea, and having an outer covering of indiarubber which can be dilated and made to plug the larynx. The lungs can then be artificially dilated by means of the tube, sufficient pressure being employed to prevent the layers of the pleura becoming separated during respiration. M. Quénu said that he preferred simple tracheotomy, the danger of which he considered to be exaggerated. M. Delorme averred that it is only necessary to advise the patient to cough, when the lung will be seen to again become distended.

*The Syphilitic Infection of a Wet-Nurse: a Strange Medico-Legal Point.*

A recent judicial decision has formed the text for a discussion at the Society of Legal Medicine. It has been decided at a Paris law court that if a nurse contracts syphilis from her nursling she has a right to recover damages from the father and mother of the child. The nurse in this case had contracted syphilis which she had not only given to her own child, who died, but also to her husband. The child who had caused all the trouble had no signs of syphilis at birth; these only appeared later, and it was only then that the nurse became infected. Neither the father nor the mother of the child had any signs of syphilis, and both declared that neither of them had ever had it. The court usually in such case orders damages to be paid to the nurse, but in this case it declared itself unable to decide and called Professor Fournier to clear the matter up. He gave it as his opinion that the parents had no visible signs of syphilis and that the child had signs of hereditary syphilis, therefore the important point was to prove the *bona fides* of the parents. The tribunal did not condemn the parents, but recognised that the nurse had suffered damages. They decided that the responsibility of the father was doubtful, because it was possible that he was not the real father. As for the mother, if she were blameable her fault could not make her husband pecuniarily responsible, for by French law the husband is not responsible for debts which his wife may contract *without his authorisation*. As it was obvious that no one was to blame there was no possibility of anyone getting damages, and the luckless nurse has every reason to remember the proverb, *Summum jus summa injuria*.

Dr. Hutinel, well known for his writings on the diseases of children, has just been made Professor of Medical Pathology at the Paris Faculty of Medicine.

Feb. 15th.

## VIENNA.

(FROM OUR OWN CORRESPONDENT.)

*The Austrian Medical Chambers.*

As I have frequently had occasion to mention the Austrian Medical Chambers (*Aerztekammern*), some account of their organisation and functions may perhaps be of interest to the readers of THE LANCET. There are, in all, nineteen medical chambers in Austria, distributed as follows:—In Bukowina, Dalmatia, Carinthia, Krain, Moravia, Silesia, Upper Austria, Salzburg, and Styria, one each; in Galicia and Lower Austria, two each; and in Istria and Tyrol, three each. Every medical man is obliged to report himself and notify certain particulars to the chamber for the province or district in which he happens to reside. The powers of the chambers are not very extensive; they discuss matters relative to the general interests of the medical profession, they are expected to uphold its privileges and influence, and the courts of law are entitled to ask the chambers for expressions of opinion in special cases. Each chamber consists of at least nine members, who are elected by the medical men of the province or district, and each chamber has a president, a vice-president, and a council of honour composed of from three to seven members. The council of honour has to decide questions of ethics, disputes occurring between medical men, and complaints of various kinds; it is also empowered to take proceedings against medical men who are guilty of professional misbehaviour, and may sentence them to pay fines not exceeding £20. That is the full extent of the power of a chamber, and the medical men whom it has censured or fined have the right of appeal to the law courts. Their powers being so limited it is not surprising that the chambers have but little influence and that the majority of the medical profession consider that they ought to be re-organised and invested with greater authority.

*Medical Aid Societies.*

The rooms of the Medical Society have never been so crowded as on Feb. 9th, when about 1000 medical men from

all quarters of Vienna attended a meeting which was held for the purpose of protesting against the Government proposal to make insurance against sickness obligatory on employers and tradesmen. Although it may be impossible to prevent the measure passing into law, yet it was most satisfactory to find that the medical men are so unanimous in their opposition to the scheme. The President (Dr. Heim) in his opening address read letters approving of the objects of the meeting received from the medical chambers of Moravia, Istria, Bukowina, and Silesia; he also submitted a resolution proposed by Dr. Beer to the effect that medical men all over the country should enter into an agreement not to hold any appointment in connexion with the medical aid societies composed of employers and tradesmen. The first reporter, Dr. Scholz, referred to the numerous associations formed for the purpose of supplying medical aid at low rates, not only to the poor, but also to well-to-do patients, and he quoted statistics showing that, according to the conditions of medical practice which either actually exist or may be expected very soon, it is inevitable that only one medical man in six will be able to make a livelihood. He reminded his hearers that they were in duty bound to refrain from intensifying the hardships of the situation by unprofessional competition and by making visits for each of which they would receive a penny. He was of opinion that every medical man should be employed by the State and that the profession should be efficiently organised. Dr. Herz presented a highly interesting report on the evils which the present system of medical aid inflicts both on the profession and on their patients. He said that the Government proposal to establish medical aid societies among the middle classes will be the ruin of the medical profession, for medicine cannot be conscientiously practised except by persons who acknowledge the paramount obligations of morality and honour, but needy practitioners suffering from the stress of competition and inadequate remuneration will be only too likely to disregard ethical considerations. The present system of treating club members is objectionable, for it leaves the patient no choice in the selection of his adviser; moreover, no medical man can make two hundred diagnoses in a day, and in hurrying through so large a number of visits it is impossible to give the requisite attention to individual cases. He recommended the introduction of the "free choice" system which is in force in Berlin, and denounced the proposal that employers and tradesmen should receive medical treatment at the same rates as the working classes. In the result the following resolutions were unanimously adopted: (1) the system under which members of clubs and friendly societies combine to obtain medical attendance is opposed to the interests both of the patient and the medical officer; (2) the proposal to extend the principle of insurance against sickness and to render it compulsory on employers of labour and tradesmen will have a disastrous effect on the medical profession; and (3) the "free choice" system under which patients have the option of selecting their medical attendants is preferable to the existing method.

*The Serum Diagnosis of Enteric Fever.*

A medical paper claims for Professor Max Gruber priority as the discoverer of the serum diagnosis of enteric fever. The actual fact is that Gruber's articles on the subject appeared in print before Widal's, but the latter has the merit of having proved that the blood of patients affected with enteric fever furnishes a serum which yields a reaction, whereas Gruber applied an agar-culture for this purpose. We, therefore, owe the practical application of this method to Widal and the idea to Gruber, and the process may for this reason be appropriately called the Gruber-Widal reaction.

*Pemphigus Vegetans.*

At the last meeting of the Medical Society Professor Neumann exhibited a case of Pemphigus Vegetans. In the inguinal and anal folds there were reddish and white efflorescences about the size of a lentil and also moist patches. The patient suffered from dyspnœa, increased temperature, and emaciation. The affection of the skin had been increasing for some weeks and there are now symmetrical papillary protuberances from which there comes a viscid and purulent discharge of a reddish colour. The disease was first described by Neumann and forty cases have been recorded up to the present time. The prognosis is very bad, a single vesicle being a sufficient indication of a fatal result, which, as a rule, occurs within nine months. The histological changes arise in the epidermis and the upper layer of the cutis. Profuse suppuration takes place in the stratum spinosum or undermost layer of the epidermis, elevating the horny layer, the papillary bodies become enlarged, the lymph vessels and bloodvessels become dilated, the hair follicles are obstructed, and the cells of the connective tissue contain pigment.

*Professor Schroetter.*

Professor Leopold Schroetter, chief of the third medical clinic of the General Hospital, celebrated his sixtieth birthday last week. Professor Schroetter was for many years assistant to Skoda; he subsequently devoted himself to laryngology and published the well-known "Vorlesungen über Krankheiten des Kehlkopfes" (Lectures on Diseases of the Larynx). Some five years ago a third medical clinic was established and he was promoted to be ordinary professor and director of this clinic. For many years he advocated the founding of an asylum for patients affected with pulmonary tuberculosis and his project is now to be realised. On the occasion of his sixtieth birthday a pamphlet was printed containing contributions by Nothnagel, Leyden, and some other eminent physicians.

Feb. 14th.

## CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

*Precautions against the Plague.*

THE Superior Council of Health has seriously occupied itself in discussing the measures to be taken in the event of the plague approaching, or being introduced into, Turkish territory. The Government has, no doubt, good reasons to prepare against the invader, as thousands of pilgrims from the panic-stricken districts of India come to Mecca, the holy place of Islam. The sanitary state of the country, even in the capital itself, is far from being satisfactory. The Turkish authorities everywhere evince a good deal of anxiety and make great noise and show when the country is actually confronted with epidemics; but when the immediate danger is over they do not seem to pay the slightest attention to sanitation. These paroxysmal efforts of the authorities have been noticed in all epidemics. The Turkish Government is assured that Russia has taken all the necessary measures against the plague at the Russo-Turkish frontier; so that the Turco-Persian frontier remains to be watched. A military cordon has been appointed at Bassorah to watch the route between that town and Hanekine, the only road of communication. By order of the same council, Dr. Duca, delegate of the sanitary administration of this town to the International Council of Health in Egypt, has been appointed to Camaren, where he, together with Dr. Vaume, will watch the application of hygienic measures ot the Indian pilgrims.

*Dr. Tiriakian.*

Dr. Tiriakian, an Armenian physician of high repute in Constantinople, left the country some months ago for Persia. We read in the daily papers that he has been nominated member of the sanitary council at Teheran, which has only lately been formed under the presidency of His Majesty the Shah. Dr. Tiriakian is a man of great ability; while at Constantinople he filled several important posts. He was consulting physician to the great Armenian National Hospital, a member of the Armenian Board of Education, and for many years he had a seat at the National Assembly. His loss is felt by us all; at the same time we are happy to hear of his success and prosperity in Persia.

Feb. 6th.

LITERARY INTELLIGENCE. — Messrs. Archibald Constable and Co., 2, Whitehall-gardens, Westminster, have this week published Dr. Fridtjof Nansen's "Farthest North," being the narrative of the voyage and exploration of the *Fram*, 1893-96, and the fifteen months' sledge expedition by Dr. Nansen, with an appendix by Otto Sverdrup. The work is in two volumes, large demy 8vo, and contains about 120 full-page and numerous text illustrations, together with sixteen coloured plates in facsimile from Dr. Nansen's own sketches, portrait, photogravures, and maps. The price is two guineas net.—Sir William Broadbent, Bart., has a work in the press on "The Prognosis and Treatment of Heart Disease," which will shortly be published by Messrs. Baillière, Tindall, and Cox.

# Obituary.

## GEORGE DAVID POLLOCK, F.R.C.S. ENG.,

CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

THE profession will learn with great regret, as we have done, of the death of Mr. George David Pollock, Senior Consulting Surgeon to St. George's Hospital, which occurred at his residence, 35, Chester-square, S.W., on Sunday last, Feb. 14th, after a short attack of pneumonia.

Mr. Pollock was the second son of Field Marshal Sir George Pollock, Bart., G.C.B., G.C.S.I., the hero of the Khyber Pass and Constable of the Tower. He was born in 1817, and was, therefore, in his eightieth year. He received his medical education at St. George's Hospital and also as an apprentice to a practitioner in the country; and he was always ready to point out the value of the informal training which he received during that apprenticeship. He became house surgeon to Sir Benjamin Brodie and in 1840 became a Member of the Royal College of Surgeons of England. In 1843, through the great influence of his father and Sir Benjamin Brodie, who was much attached to him, he obtained the post of resident physician to Lord Metcalfe, appointed in this year Governor-General of Canada. The post in the colonial household was no sinecure, for Lord Metcalfe suffered from malignant disease of the face, which at length deprived him of the sight of one eye and compelled him to resign his position in 1845. Pollock returned to England with Lord Metcalfe—who died in 1846—and in that same year became a Fellow of the Royal College of Surgeons of England and was elected Assistant Surgeon to St. George's Hospital. From that time forward his name is associated with that hospital in the minds of many generations of his pupils, for he served upon the honorary staff for no less than thirty-six years. In 1852, upon the foundation of the Children's Hospital in Great Ormond-street, he was elected Surgeon to the new institution, and a little later he was appointed Examiner in Surgery for the Army Medical Staff and the Indian Medical Service. Here his kindness and geniality were found by the competitors to compare so favourably with the grimness of many of the gentlemen by whom they had previously been examined when trying for their diplomas that a notion sprang up that he attached as much importance to the demeanour and appearance of a candidate as he did to his scientific knowledge, a notion which, we need hardly say, was totally erroneous. He was a lenient examiner but a perfectly fair one.

As a surgeon Mr. Pollock was distinguished for his boldness in operating, for the care with which he examined his cases and formed his diagnosis, and for the minute attention he bestowed on every detail of the after-treatment. He was not specially original, he introduced no great advance in surgical science and left no striking work behind him; but those who followed his daily practice in his hospital could best judge of the success with which he carried out the surgical teaching of his masters—Brodie and Cæsar Hawkins. Both of these great surgeons were more celebrated for ability in diagnosis than for brilliancy in the operating theatre: Mr. Pollock was not less careful than they in his attention to diagnosis, but he shrank from no operative difficulties, and rather shone both in the greater operations and in the more delicate proceedings of plastic and ophthalmic surgery. Both in hospital and private practice his geniality of heart and his unwearied kindness endeared him to his patients, many of whom now recall the great obligations they owe to him both as a surgeon and a friend.

As a colleague no one could be more thorough and more perfectly trustworthy. A good colleague is not a man who assents to anything, but one who does not differ without cause, who will hear reason, whose judgment is based on honest motives, and who can be relied on to do what he thinks to be right. Everyone who acted with Pollock knew that he fulfilled all these conditions. He sought no selfish ends, but acted in all things with a single object—the good of the hospital or school of which he was an officer. His opinions on all matters, whether of surgery, of hospital administration, or of school management, were generally sagacious and always sincere; and he was quite ready to re-consider them if good cause were shown why he should do so. Even serious differences on important questions, such as must occur in the management of great institutions, were so treated by him as not to interrupt personal friendship; and he quitted the active service of the hospital retaining the respect and affection of all with whom he had acted.

It remains to speak of the part which Mr. Pollock took in the movement for the reform of the Royal College of Surgeons of England as President of the Association of Fellows. In this, as in all other actions of his life, his motives were the highest; he acted as he thought it his duty to act. His position and reputation as a surgeon would have ensured his early admission into the Council of the College and to its highest offices, but he disapproved of the system on which the College was then administered and would never allow himself to be placed in nomination for the Council till in the last year of his life, when he thought he saw a chance of serving the interests of reform by taking his seat on the Council; and therefore against the opinion of many of his friends he expressed his willingness to serve if elected. It was probably well for him that the constituency preferred younger candidates. But this, as well as every other incident in his connexion with the Fellows' Association, was creditable to his high sense of honour and duty and showed the indomitable spirit which forbade him to shrink from labour at an age which entitled him to repose.

Mr. Pollock's literary contributions to his science were few and consisted of certain articles in "Holmes's System of Surgery"—the subjects of which were Injuries to the Abdomen and Diseases of the Mouth, Pharynx, and Intestines—and one or two papers communicated to the learned societies. That these bodies held him in no lightness of esteem because he was an infrequent reader of papers is shown by the fact that he was President of the Royal Medical and Chirurgical Society and of the Pathological Society. He was also Surgeon-in-Ordinary to the Prince of Wales.

By Mr. Pollock's death we have lost an exponent of old-fashioned manners as well as a justly esteemed leader. The scrupulously professional attire which he invariably wore consorted well with his courtesy and dignity of demeanour, and the two formed a demonstration of his own great respect for his calling. It will probably surprise many to whom his fresh alert face was well known to learn that he had attained so great an age of seventy-nine. He married in 1850 Marianne, daughter of Mr. Robert Saunders, by whom he had five children, three of whom survive him.

A memorial service will be held on Saturday next, at 2 P.M., at St. Michael's, Chester-square.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. E. J. Lebedinski, *privat-docent* of Internal Medicine in the Military Academy of Medicine, St. Petersburg.—Dr. A. F. Prussak, Emeritus Professor of Otology in the Military Medical Academy, St. Petersburg.—Dr. Wannebroucq, formerly Professor of Clinical Medicine in the Lille Faculty of Medicine.

# Medical News.

UNIVERSITY OF LONDON.—At the Preliminary Scientific (M.B.) Examination in January the following candidates were successful in the subjects indicated:—

*Entire Examination.—First Division:* Charles Henry Dawe, Guy's Hospital and University Tutorial College; Charles Wesley Forsyth, Owens College and private study; Somerville Hastings, Middlesex Hospital and University and University Tutorial Colleges; John Borland McVail, private study and University Tutorial College; Percy John Robbins, St. Mary's Hospital; and William Morton Robson, Guy's Hospital. *Second Division:* Charles Edwin Adams, Guy's Hospital; Richard Appleton, B.A., University Tutorial College and private tuition; Agnes Maud Brown, University and University Tutorial Colleges; Henry Butler, University Tutorial College; Herbert Melville Churchill, Brighton Grammar School; James Duncan Clay, King's College; Percy Reynolds, B.A., Yorkshire College and private study; Anna Maude Smith, Alwyne and Birkbeck Institutes; Vere Godsalve Ward, St. Bartholomew's Hospital; and Walter Perceval Yetts, University Extension College, Reading, and University Tutorial College.

*Chemistry and Experimental Physics.*—Joseph Ebenezer Adams, City of London School; Algernon James Beadel, Guy's Hospital and University Tutorial College; *Maud Bennett, University Tutorial College and Birkbeck Institution; *Victoria E. May Bennett, University College, Cardiff; *Lilly Alice Bilke, Carlyon College; *Alwyn Hewett Bradley, Mason College; *William Wellesley Campbell, King's College; George Arthur Charter, private study;

*George Brooke F. Churchill, Guy's Hospital and University Tutorial College; *Olive Claydon and *Anne Fenton Cleaver, University Tutorial College; William Henchman Cole, Guy's Hospital and University Tutorial College; Carey Franklin Coombs, University College, Bristol; *Edgar Winn Fox Dolman, Epsom and King's Colleges; Laetitia Nora Ede, private study and tuition; *Frederic Augustus Edmonds, Epsom and University Colleges and private study; Edgar Severn Ellis, Cheltenham Science School and St. Bartholomew's Hospital; *Julian Craig Fleming and Geo. Francis Innes Harkness, University and University Tutorial Colleges; *Frederic Rosenberg Harris, St. Mary's Hospital and private study; *Anne Elizabeth Hooper, University College, Nottingham; *Andrew Ferguson Horn, University and University Tutorial Colleges; Norris Norman A. Houghton, University Tutorial College; Lawson Jervis Hughes, Guy's Hospital and University Tutorial College; *Frances Mary Jenkin, Westfield College and Plymouth Technical School; *Lionel Capper Johnson, Owens College; Henry Arthur Kellond-Knight, St. Bartholomew's Hospital; *Ernest Thomas Kendon, London Hospital; *Reinold Frederic Korte, private study; *Charles Ernest Lakin, Middlesex Hospital, University College, and private tuition; *Alfred Lewthwaite, University Tutorial College; Charles Ernest Wheatley Lyth, Wesley and Firth Colleges; *Agnes Emma Mecklenburg, University and University Tutorial Colleges; *Helen Moore, University Tutorial College; *Mary Eva Hastings Morris, University College, Aberystwith; *William John Morrish, St. Mary's Hospital; Gilbert Phillips Mosscrop, University Tutorial College; * Harold Rundle Fitz Nattle, private study; * Herbert Harland Raw, Kingswood and St. Bartholomew's Hospital; William Arthur Rees, Middlesex Hospital, University College, and private study; George Struan Robertson, Guy's Hospital and Dulwich College; Frederick Cecil Robinson, Guy's Hospital; Charles Edward Rogers, B.A., Yorkshire College and Leeds School of Medicine; * John Bart Rous, St. Mary's Hospital; Charles Chapman Rushton, Owens College and private study; * Charles Russ, St. Mary's Hospital and Birkbeck Institute; * Agnes Catherine Scott, Yorkshire and University Tutorial Colleges; * Edith Serjeant, private study and University Tutorial College; * Charles William Smith, private study; James Ernest Sutcliffe Smith, Owens College; * Louisa Spicer, and * Ethel Maud Stacy, University and University Tutorial Colleges; James Batson Stephens, University Tutorial College; *Emily Gertrude Stuart, University Lectures, Oxford, University Tutorial College, and private tuition; *Robert Archibald S. Sunderland, St. Bartholomew's Hospital; Alice Taylor, University College and private tuition; Andrew Telfer, B.A., private study and tuition; Louisa Graham Thacker, Bedford College, London; *Albert Edward Thomas, St. Bartholomew's Hospital; *Herbert Kingsley Ward, Mason College; Hugh Watts, Dulwich College and St. George's Hospital; Eugene Christopher Whitehead, Wyggeston School, Leicester; *Arthur Whitehead-Smith, Epsom College and St. Thomas's Hospital; *Clare Aveling Wiggins, St. Mary's Hospital; *John Thomas Williams, University College, Cardiff; Lauriston Leonard Winterbotham, Cheltenham School of Science; *Frank Herbert Wood, St. Bartholomew's Hospital and Alwyne Institute; *Maurice Dunbar Wood, Guy's Hospital; and Graham Pallister Young, University Tutorial College.

*Biology.*—*Anne Thompson Barnard, Birkbeck Institution; Henry Edgar Barnes, St. Mary's Hospital; *Mildred Mabel Burgess, University Tutorial College; *Brynmor Chiles-Evans, University Colleges, Aberystwith and Cardiff; *Edward Murray Clarke, University College, Cardiff; *George Thomas Collins and *Micnael Abdy Collins, University Tutorial College and Guy's Hospital; Lidbrooke Frank Cope, St. George's Hospital; *James Frederick Corson, Owens College and private study; John Cyril Curtis, University College and private study; *Harold John De Brent, St. Thomas's Hospital; *Thomas Scarbrough Dudding, Oundle School and London Hospital; *John Parker Ellerington, Carlyon College and private tuition; *John Evans, University College, Aberystwith and Guy's Hospital; *Arthur Claypon H. Gray, Guy's Hospital and Malvern College; *Charles Alwis Hewavitarna, University College; *Henry Crewe Keates, Guy's Hospital and University Tutorial College; Robert Hammersley Lee, King's College; *George Bartley McKean, private study; Newton Herbert Marshall, B.A., Baptist and University Colleges, Nottingham; Arthur Francis Martin, Owens College; Sydney Wood Milner and *Frank Herbert Noke, St. Bartholomew's Hospital; *William Gibson Parker, Guy's Hospital; *Francis Baldwin Pinniger, Charing-cross Hospital; Henry William Plant, B.A., Mason College; *Frank Leslie Thomas, Guy's Hospital and University Tutorial College; *Robert Nimmo Watson, Westminster Hospital, University Tutorial College, and private study; and Herbert Gresham Wright, King's College.

* These candidates have now completed the examination.

FOREIGN UNIVERSITY INTELLIGENCE.—*Baltimore (Johns Hopkins University):* Dr. L. F. Barker has been appointed Assistant Professor of Anatomy.—*Berlin:* Dr. Klemperer and Dr. Rosenheim, *privat-docenten* of Internal Medicine, have been granted the title of Professor.—*Groningen:* Dr. Wiersma has qualified as *privat-docent* of Psychiatry.—*Heidelberg:* Dr. Nissl has qualified as *privat-docent* of Psychiatry.—*Innsbruck:* Dr. Loos has been appointed Extraordinary Professor of Children's Diseases.—*Kazan:* Dr. Darkshevich has been appointed Professor of Neurology. Dr. Savchenko of Kieff has been appointed Extraordinary Professor of General Pathology.

MESSRS. GEORGE MASON AND CO., LIMITED, of Chelsea Works, Walham-green, manufacturers of specialities for invalids, write to state that they have no connexion whatever with the firm of Frederick Mason of Acre-lane, Brixton, against whom a receiving order in bankruptcy has recently been made.

THE annual general court of the governors of Charing-cross Hospital was held on Feb. 17th, when it was announced that the Lord Mayor had consented to hold a meeting on March 5th in aid of the special appeal for £100,000 to rescue the institution from its unfortunate pecuniary position.

FREEMASONRY: ÆSCULAPIUS LODGE, No. 2410.—A regular meeting of this lodge was held at the Café Royal, Regent-street, on Feb. 10th, Thomas Dutton, M.D. Durh., the Master, being in the chair. C. H. Broadhurst, L.R.C.P. Lond., M.R.C.S. Eng., was admitted to the third degree. L. H. Pegler, M.D. Edin., H. S. Lunn, M.A., M.D. Dub., W. E. Gillson, L.R.C.P. Lond., M.R.C.S. Eng., and G. Newton Pitt, M.A., M.D. Cantab., F.R.C.P. Lond., were admitted to the second degree, and E. V. White, F.R.C.S. Eng., was admitted into Masonry. There were a large number of visitors present, and the meeting was very successful. Some forty brethren afterwards dined together.

THE ROYAL FREE HOSPITAL.—The annual report of the Royal Free Hospital shows that during the year 1896 there were 1950 in-patients admitted, 1767 were discharged, cured, or relieved, and 161 died; the average residence of these patients was about twenty-four days. There were 21,660 patients and 17,332 casualty patients. With a view to avoid abuse of the out-patient department Miss Stewart, the hospital almoner, working in connexion with the Charity Organisation Society, makes inquiries into the circumstances of applicants. The total ordinary income for the year, including legacies, was £14,477, and the expenditure was £11,226. A donation of £1700 was given by Mr. John Bentley to the fund for the new buildings. Twenty-three of the students attending the School of Medicine for Women and the Royal Free Hospital became qualified during 1896; there were 159 students at the end of the year.

WIGAN MEDICAL SOCIETY.—The annual meeting of the above society was held on Feb. 5th in the Royal Albert Edward Infirmary, Mr. C. R. Graham, President, being in the chair. The following office-bearers for 1897 were unanimously elected:—President: Mr. C. T. Street. Committee: Mr. Street (President), Mr. Graham (ex-President), Mr. Mitchell Roocroft, Mr. G. H. Monks, Mr. Brady, Mr. Cowan, and Dr. Benson. Hon. Treasurer: Mr. G. H. Monks. Hon. Secretary: Mr. Wm. Berry. Mr. Damer Harrisson read a paper entitled "Brain Surgery," and illustrated his remarks by means of lantern slides. A cordial vote of thanks was accorded to Mr. Harrisson for his paper, want of time preventing a full discussion.—Mr. Hugh G. Jones showed three cases of Double Optic Neuritis and made some remarks.—Mr. Cowan showed a case of Jacksonian Epilepsy which had been considerably improved by Trephining.—Dr. Milroy showed the following pathological specimens: (1) Gangrene of Lung following Poisoning by Ammonia Liniment; (2) Gangrene of the Œsophagus with Perforation, said to have followed injury at football; (3) Dermoid Cyst of Ovary; (4) Sarcoma of Inferior Maxilla; (5) Cystic Kidney; and (6) a Gall-stone weighing 265 grains.

THE HOWARD ASSOCIATION.—At the February meeting of the committee of the Howard Association, 5, Bishopsgate Without, E.C., a resolution was adopted expressing approval of the action of the Local Government Board in deciding that pauper children shall remain as hitherto under the care of the various boards of guardians. The committee think that experience has proved that in many districts the education and boarding-out of such children may be safely entrusted to the boards of guardians and the committees of ladies whom they appoint for the purpose of exercising supervision over details, whereas the placing of the children under a new central Education Board, as suggested by some well-meaning persons, would be an experiment involving undesirable risks and dangers. The committee of the association, moreover, is of opinion that the practice of boarding-out should be extended and that there should at the same time be an increase both of the voluntary visitation and the official inspection of the children under that method of training. The committee have also invited the attention of the Earl of Elgin, Governor-General of India, to the necessity for making provision in Indian prisons for the separation of young girls from adult criminals, prostitutes, and habitual thieves.

UNIVERSITY OF CAMBRIDGE.—The third examination for the degrees of M.B. and B.C. will begin on April 27th. Names are to be sent in by April 1st. The first and second examinations will begin on June 14th. It is proposed to confer on Dr. Nansen the degree of Sc.D. *honoris causâ* on March 16th. On Feb. 11th the degrees of M.B. and B.C. were conferred on Mr. E. C. Salt, B.A., of Emmanuel, and the degree of B.C. on Mr. R. W. Wakefield of Trinity.

ALLBUTT'S "SYSTEM OF MEDICINE."—The following notice has been issued by Messrs. Macmillan and Co., Limited, to subscribers:—

"The delay in the issue of Volume II. of this important work, which the editor and the publishers regret as keenly as any subscriber can do, has been entirely due to the delay in the issue of the Report of the Royal Commission of Vaccination. Until this was in the hands of those who had undertaken to contribute articles on this subject, it was impossible for them to deal with all the facts of a complicated problem fully and authoritatively in the light of the latest knowledge and opinion. Every possible effort has been made to get these articles completed, and everything is now in the printer's hands. All the rest of the volume has been practically ready for many months, and the whole of Volume III. and the greater part of Volume IV. is already in type, so that subscribers can feel assured that so long an interval will not again elapse between the appearance of one volume and another, and that the whole 'System' will be complete within a reasonable period."

THE Rochdale and District Medical Society at a recent meeting passed the following resolutions unanimously:—"That on and after June 1st, 1897, whenever any registered medical practitioner or practitioner entitled to be registered (other than practitioners empowered by the Medical Act, 1886) either directly or indirectly issues, or sanctions, or takes part in the issuing of, any instrument or document professing to empower the holder of such instrument or document to practise, or to hold himself or herself out as being thereby entitled to practise, any part or branch of medicine, surgery, or midwifery, such practitioner shall, on due proof being given of his or her so doing, be judged by the General Medical Council to have been guilty of infamous conduct in a professional respect and his or her name shall be erased from the Register and registrable qualification taken from him or her." "Seeing that the Midwives Registration Bill would, if it became law, create an independent order of midwifery practitioners, this meeting, while anxious that the training of monthly nurses should be improved, records its emphatic protest against such proposed legislation, and determines to form a committee to watch the progress of, and oppose, any legislation such as that hitherto proposed for the registration of midwives." "That these resolutions be sent to the President of the General Medical Council, the five Direct Representatives, THE LANCET, and the *British Medical Journal*."

PLYMOUTH MEDICAL SOCIETY.—A clinical meeting was held on Feb. 13th.—Mr. J. R. Rolston showed a girl, aged fifteen years, with Hydrophthalmos and Coloboma of Lens. In the right eye the cornea measured 15 mm., and in the left eye 13 mm. In the right eye there was an irregular notching of the temporal margin of the lens and the suspensory ligament could be distinctly seen.—Mr. Woollcombe showed: 1. A man on whom he had operated three months previously for a Fusiform Popliteal Aneurysm. After intermittent pressure on the vessel just before entering Hunter's canal for ten days to establish collateral circulation the vessel was tied with kangaroo tendon and divided at the above point. The man was walking eleven miles a day and doing his work as a mason in addition. 2. A case of Ununited Fracture of Olecranon which he had drilled and brought together with kangaroo tendon four months after the original injury. The boy now (ten weeks after operation) was as strong in this arm as in the other. There was no separation of fragments.—Mr. Row showed (1) a woman with Overgrowth of Hair on Face; (2 and 3) two men with Ulceration of Tongue, one being undoubtedly epithelioma and the other, although it originated as a gumma, thought to have become epitheliomatous; and (4) the Uterus and Appendages from a girl who died after an illegal operation.—Dr. Webber showed a Sternum from a woman who died after an operation for Mammary Scirrhus, and who was found to have extensive visceral deposits. The sternum had extensive marrow infection and was about twice its normal thickness and bowed forward as in extreme emphysema. A microscopic section of the marrow was also exhibited showing its malignant nature.—Mr. Lucy showed an original Automatic Wound Retractor.

THE annual general court of the governors of the City of London Lying-in Hospital was held on Feb. 17th, when the chairman was able to announce that no maternal death had occurred in the hospital during the year.

FOOTBALL CASUALTIES.—In a match played at Wells (Somerset) on the 6th inst. between Wells and Paulton a member of the former team received a severe kick in the face, which fractured his nasal bone.—While playing a match on the 30th ult., at Forest Fach, near Swansea, between the local junior teams, a player sustained injuries in the abdomen. He subsequently gradually sank, and died on the 8th inst.—During a match played in London last week a forward player severely injured his knee.—In the first half of the English Cup Tie at Perry Barr, Birmingham, on Saturday last, between Notts County and Aston Villa, the right half-back of the Nottingham team fractured his right leg badly just above the ankle, and was removed to the General Hospital, Birmingham.

PRESENTATIONS TO MEDICAL MEN.—Mr. James H. Fergusson, F.R.C.S. Irel., L.R.C.P. Edin., L.F.P.S. Glasg., D.P.H., of Killygordon, has been presented by his friends with an address, a complete laboratory (bacteriological, chemical, and hygienic) apparatus, and a purse of sovereigns.—Dr. Wm. A. Russell, of Wingate, county Durham, has been the recipient of a valuable timepiece from the members of the Wingate and District Ambulance Class, as an acknowledgment of his services as Lecturer on Ambulance Aid.—Dr. Hugh Steven, of Codford St. Mary, Wilts, on leaving his medical district at Codford, has been the recipient of a testimonial, subscribed for by patients in each parish of his district, as a grateful recognition of many kindnesses received from him and Mrs. Steven during their residence in the neighbourhood. The presentation consisted of a dining-room timepiece, a silver plated sugar-basin and cream-jug with inscription, an illuminated address, and a list of subscribers.

THE DIFFUSION OF SMALL-POX.—The comparative freedom from small-pox which London has of late enjoyed is no longer a matter for congratulation, fresh outbreaks having occurred. In the four weeks ended on Nov. 28th last there was not a single notification of the disease in the whole of London, and in the succeeding five weeks, which brought the year to a close, there were only 3 notified cases, followed by 8 in the first four weeks of the current year. The admissions of small-pox cases to the hospital ships at Long Reach in the last three weeks of January had been 1, 0, and 7 respectively, and on the concluding day of that month there were 21 cases of the disease on board, as compared with 9 a week earlier. Last week there were other 20 cases admitted to the ships, and Saturday last found no fewer than 38 patients on board. The chief seat of the present outbreak seems to be on the south side of the Thames, Camberwell area apparently being the principal sufferer by the malady. We have become so accustomed of late to look with complacence on the weekly freedom from fatal small-pox that it is startling to hear that last week there were 2 deaths registered from the disease. Such was the case, but no statement was made as to the vaccination of either person, one of whom belonged to Camberwell and the other to Greenwich. Up to the night of the 17th 17 cases had been reported in, and removed from, Camberwell Infirmary.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

*The Vaccination Question.*

MEMBERS of Parliament continue to question the President of the Local Government Board with regard to the action, or want of action, on the part of boards of guardians for enforcing the Vaccination Acts. Mr. Chaplin's invariable answer is that the report of the Vaccination Commission in no way alters the law or relieves boards of guardians from prosecuting offenders.

*The Army Medical Service.*

The vote for the Medical Establishment of the Army was taken somewhat unexpectedly at a late hour on Friday, Feb. 12th, and Dr. Farquharson lost his opportunity of calling attention, as he intended to do, to several matters connected with the examinations and the treatment of medical officers after entering the service. When, however, the report of the vote was taken on Monday, Feb. 15th, he was

able to put one or two practical points to the Under Secretary for War, who undertook to give them proper consideration.

## HOUSE OF LORDS.

MONDAY, FEB. 15TH.

*Bubonic Plague in Bombay.*

Lord **Reay** addressed a question to the Under-Secretary for India with reference to protective measures against this disease and with reference to the temporary employment of retired members of the Indian Civil Service. His lordship gave some account of the discoveries of Professor **Haffkine** and Dr. **Yersin** and of the results of inoculation, and with regard to retired members of the Indian Civil Service he said there were many who had declared themselves ready at any time to go and assist their brethren in India. He hoped that no hesitation would be felt by the Home Government if an appeal came from India to mobilise those reserve forces, which certainly under the exceptional circumstances now prevailing might be used effectually and without in any way dislocating existing arrangements.—The Earl of **Onslow**, in reply, said that Dr. **Yersin** had been commissioned by the Government of Bombay to procure serum for use there, and he was expected to return to the city about the end of this month or the beginning of next provided with a sufficient quantity of it. Speaking generally, the Government of Bombay considered that inoculation appeared to afford considerable protection, but sufficient time had not yet elapsed to estimate the degree of protection or how long it would continue. With regard to the other matter no retired Indian Civil servants had as yet been sent out to India, but the India Office would be prepared to receive the names of any who were willing to volunteer for this service. It did not rest with the India Office to determine whether or not they should be sent out, but their names should be telegraphed to the Viceroy, and if in the exercise of his discretion he thought their services could be made available no doubt he would act accordingly.

## HOUSE OF COMMONS.

FRIDAY, FEB. 12TH.

*The Army Medical Service.*

Mr. **Brodrick**, Under-Secretary of State for War, made the following statement on this subject in introducing, in Committee of Supply, the Army Estimates—viz., "A thorny subject which we have had to deal with has been the condition of the medical department. For some time past, as the Committee is aware, we have had difficulty in procuring sufficient candidates for the Army Medical Department. Many reasons have been adduced for this, among which may be mentioned the question of rank and social condition, the examinations which were held to be conducted under less favourable circumstances for candidates from Irish and Scotch medical schools than for those attending London schools, the rate of pay in India, and the prolonged terms of foreign service. Lord Lansdowne has given the most careful personal attention to all these questions. He has received various deputations and has spared no pains to get to the root of the difficulty. His conclusion is that as regards the examinations, while every consideration should be given to eminent members of the Scotch and Irish medical schools in filling vacancies on the examination board, the board should be constituted solely with reference to the professional eminence of its members without regard to the mere fact of their coming from one part or another of the United Kingdom. The falling off of Irish candidates, not being more than on a par with the falling off of other candidates, has no special significance or importance. Lord Lansdowne has also reviewed the whole circumstances attending the present titles of medical officers, a question which appears to be closely bound up with their complaints of a lack of social consideration. The truth appears to be this. When the system of attaching medical officers to regiments was abandoned, on grounds which at the time were certainly deemed to be sufficient for the system of appointing them to stations, medical officers lost their special and close personal contact with their regimental brother officers. Attempts have been made to give them a better position—first, by ranking them with combatant officers on the recommendation of Sir Andrew Clark as representing the schools, and then by conceding composite medical and military titles carrying with them substantive rank in their own department. These concessions, though welcomed at the time by the profession, have not altogether acted as was desired. Lord Lansdowne is anxious that every consideration should be shown to the officers of this most valuable and distinguished department. He has, after communication with the India Office, been able to secure to the medical officer an increase of pay in India, and the Indian tour will be decreased from six years to five. Assistance will also be given to form medical messes at the large stations, quarters will be offered in barracks where possible, and opportunities to study on return from foreign service will be given. But none of the proposals which have been submitted to the Secretary of State for giving new forms of army rank to the medical staff appear to him desirable for adoption. He does not believe that by such titles the Medical Department will obtain the status to which their talents and professional acquirements entitle them, and anxious though the War Office is to meet the medical profession on all points, this is not one of those on which further action appears to be desirable.

*Health of Troops at Home and at Gibraltar.*

Sir **Howard Vincent** asked the Under-Secretary of State for War if he could inform the House how long had been the average station at Gibraltar of regiments of the line, if they had been generally reported on as inefficient or unfit to fight after service at Gibraltar, how many nights a week privates were as a rule on guard, and if more or less than the Foot Guards at Wellington or Chelsea Barracks; and if regiments suffered in greater proportion there from disease than at home.—Mr. **Brodrick** replied that the average stay of the last eleven battalions at Gibraltar had been three years. The reports on regiments leaving Gibraltar had not been such as were indicated in the question; the Foot Guards in London as a rule had one night out of bed on guard in every eight nights, and the guard duty at Gibraltar was about the same. The health statistics show that in the last ten years the admissions to hospital at Gibraltar were 39 per 1,000 less than in the United Kingdom, the number of men discharged as invalids were 3·71 per 1000 at Gibraltar, while those discharged in the United Kingdom were 16·34 per 1000, and the number of deaths at Gibraltar were 4·90 per 1000, against 5·20 in the United Kingdom.

MONDAY, FEB. 15TH.

*Hospital Accommodation at Sierra Leone.*

Mr. **Powell Williams**, replying to a question on this subject put by Mr. **Bill**, said that the question of where the additional hospital accommodation for Sierra Leone shall be located was still under consideration. An increase to the garrison of Sierra Leone was provided in the Estimates, and additional hospital accommodation would be required for the force thus added.

*Private Lunatic Asylums.*

Mr. **Field** asked the Secretary of State for the Home Department whether any regular inspection regarding the management of private lunatic asylums and their inmates was made and reported on by responsible Government officials; and whether the system and working of private lunatic asylums would be inquired into and reported to the House.—Sir **Matthew White Ridley** replied that all licensed houses were regularly visited by the Lunacy Commissioners—those in the metropolitan area six times a year, and those outside that area twice. The latter are also visited six times a year by three justices and a medical practitioner appointed for the purpose by quarter sessions. He was not aware of any necessity for such an inquiry as the hon. Member suggested.

*Venereal Disease in the Army.*

Mr. **Jeffreys**, speaking on the report of the vote for the medical establishment of the army, said he wished to call attention to the terrible increase of venereal disease in the army, notwithstanding the advance in scientific knowledge and the great ability of our medical men. In India there was a tremendous increase in the disease, and a captain told him that a number of his men had to be carried on board ship wrapped up in cotton-wool, so wretched was their condition. He wished to ask the Under Secretary whether the Medical Department could not do something to stop this terrible state of things. It had been complained that our army was too small in point of numbers, but surely it would be better instead of increasing the numbers to try to stop this disease, which incapacitated so many of the men now in the ranks.—Mr. **Brodrick**, in reply, said that he was afraid that the evil lay, not at the door of the medical officers, but at the door of this House. He would not go back to the whole history of the abandonment of the Acts in 1882, but it would be in the recollection of Members that in 1893, in deference to strong expressions of opinion in Parliament, the Council in India was called upon to re-consider the Cantonments Acts, and these Acts were done away with in that year. Since then it appeared from the statistics there had been a very rapid and serious development of the worst forms of the disease. As to the figures, it was a mistake to quote 400 or 500 per 1000 as the number constantly sick. These figures represented the admissions to hospital during the year. It was to be hoped that not nearly so large a proportion of the army as had been suggested were unable to go on parade at the same time. However, the facts disclosed had constituted so serious an evil that the Secretary of State for India had found it necessary to appoint a departmental committee, and he hoped that the report of this committee would be in the hands of Members before very long. He would only add that the matter was one which must engage the serious attention of anybody who had to do with the military organisation of the country.

TUESDAY, FEB. 16TH.

*Vaccination Prosecutions.*

Mr. **Thomas Bailey** asked the Secretary of State for the Home Department whether his attention had been called to the fact that Frederick Pearse of 65, High-street, Andover, had been prosecuted sixty-three times for non-vaccination of his children, and had paid upwards of £42 in fines and costs; and that, notwithstanding the unanimous recommendations of the Royal Commission on Vaccination against repeated penalties, the said Frederick Pearse was committed to Her Majesty's prison on the 10th inst., in default of payment of a further fine; and whether he would consider this case with a view to the release of the prisoner.—Sir **Matthew White Ridley** replied that his attention had been called to the case, but he could see nothing in the facts stated to justify interference on his part.

# Appointments.

***Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.***

BARNARD, HAROLD LESLIE, M.B., M.S. Lond., F.R.C.S. Eng., has been appointed Surgical Registrar of the London Hospital.

BENNET, C. J., M.R.C.S., has been re-appointed Medical Officer of Health by the Fairfield Urban District Council.

COLBORNE, H., M.R.C.S., has been re-appointed a Medical Officer to the Hastings Dispensary.

COLEMAN, PERCY, M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Essex and Sunday School Union Convalescent Homes, vice W. Maine, resigned.

CRAWFORD, A. D., M.B., C.M. Glasg., has been appointed Medical Officer and Public Vaccinator for the Maxstoke and Coleshill Sanitary Districts.

CROOKS, JAS., M.D., C.M. Toronto, L.R.C.S. Edin., has been appointed Medical Officer for the Eighth Sanitary District of the Lexden and Winstree Union, vice H. D. Palmer, resigned.

FAWCETT, W. H., M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., D.P.H. Lond., has been appointed Medical Officer for the Wimborne Sanitary District of the Wimborne and Cranborne Union.

GREENE, HELEN M., L.S.A. Lond., M.D. Brux., has been appointed to the Staff of the Provident Dispensary, Derby.

HANHAM, F. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Southern Dispensary, Bath.

HOLLINGS, C. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer by the Calverley District Council.

HORT, E. C., L.S.A., has been appointed Medical Officer for the Long Sutton Sanitary District and for the Sutton St. James and Tydd St. Mary District.

JONES, S. EDWARDS, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Bangor and Worthenbury Sanitary District of the Ellesmere Union.

KENDALL, B. C., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Helston Public Dispensary.

KENDALL, GEO., L.R.C.P. Lond., has been appointed an Honorary Surgeon to the Battle Fire Brigade.

LEGGE, SYDNEY C., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Clinical Assistant to the Birmingham and Midland Hospital for Skin and Urinary Diseases.

LISTER, T. D., M.D., B.S. Lond., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Pathologist to the East London Hospital for Children.

MANSELL, E. R., M.R.C.S., has been re-appointed a Medical Officer to the Hastings Dispensary.

MARSHALL, HOWARD, M.B., B.C. Camb., has been appointed Medical Officer for the No. 3 Sanitary District (Bexhill) of the Battle Union.

NICKERSON, W. H. S., M.B., Ch.B. Vict., has been appointed Junior Assistant House Surgeon to the Stockport Infirmary.

O'DOWD, JOHN, L.F.P.S. Glasg., has been appointed Medical Officer for Netherton, of the Dudley Union.

OGLE, CYRIL, M.A., M.B. Oxon., M.R.C.P. Lond., has been appointed Assistant Physician to St. George's Hospital, London.

PARKE, T. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer and Public Vaccinator by the Bakewell Rural District Council.

POWELL, GEO. W., M.B., B.Ch. Dub., has been appointed an Honorary Physician to the Children's Hospital, Birmingham.

PRICE, J. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Southern Sanitary District of the Dudley Union.

READMAN, T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Workhouse, Skipton.

SANDFORD, H. V., L.R.C.P. Lond., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the City of Hereford.

SHORTER, H. G., M.R.C.S., has been re-appointed a Medical Officer to the Hastings Dispensary.

SMYTH, T. E., M.D., B.Ch. Dub., has been appointed Medical Officer for the Milton Abbot Sanitary District of the Tavistock Union.

TURNER, JOHN ANDREW, M.B., D.P.H., M.O.H., has been appointed Medical Officer of Health to the Combined Districts of East Herts and Essex.

TUXFORD, A., M.D. Edin., has been re-appointed Medical Officer by the Boston Rural District Council.

WEARNE, W., M.R.C.S., has been appointed a Medical Officer for the Helston Public Dispensary.

WILDING, W. F. W., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Hindley District Council.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester-street, London, S.W.—Resident House Surgeon for six months. Board, lodging, and washing provided.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon for twelve months. Salary £80 per annum, with furnished apartments, board, and attendance.

BOROUGH OF BURTON-UPON-TRENT.—Medical Officer of Health for the District of the Borough. Salary at the rate of £350 per annum, exclusive of authorised disbursements.—Applications to the Town Clerk, Town Hall, Burton-upon-Trent.

BRISTOL GENERAL HOSPITAL.—Physician-Accoucheur and an Assistant Physician-Accoucheur.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House Surgeon for six months (non-resident). Honorarium, conditionally, of 25 guineas will be given.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—House Surgeon and Secretary. Salary £90 per annum, with furnished rooms in the Dispensary House, an allowance of £20 for coals and candles, and a further allowance for a housekeeper.

DARENTH SCHOOL FOR IMBECILES, near Dartford, Kent.—Assistant Medical Officer. Salary £160 per annum, rising £20 annually to £200, subject to statutory deduction under the Poor-law Officers Superannuation Act, 1896, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Norfolk House Norfolk street, Strand, London.

DERBY BOROUGH HOSPITAL.—Assistant Medical Officer. Salary £100 per annum, with board and washing.

EAST END BRANCH OF THE CHILDREN'S HOSPITAL, Sheffield.—Lady House Surgeon (Out-patient Department only). Salary £70 per annum, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis-road, Shadwell, E.—House Surgeon. Board, lodging, &c., provided. No salary.

GENERAL HOSPITAL, Birmingham.—Pathologist, for one year. Salary £100 per annum, with board and residence, £20 per annum being allowed till residence is provided in the new hospital.

GENERAL HOSPITAL, Birmingham.—House Physician, for one year. Salary £70 per annum, with residence, board, and washing.

GENERAL INFIRMARY, Northampton.—Assistant House Surgeon, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, and washing.

KING'S COLLEGE, London.—Professorship of Anatomy.

LEICESTER INFIRMARY.—House Physician, for twelve months. Salary £80 per annum, with board, apartments, and washing.

LIVERPOOL ROYAL INFIRMARY.—Honorary Physician.

LONDON HOSPITAL MEDICAL COLLEGE, Mile-end, E.—Demonstrator of Physiology. Salary £100 a year. Also Assistant Demonstrator of Anatomy. Salary £90 a year.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer, for one year or more. Salary 100 guineas per annum; board, lodging, and washing provided.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer, for six months, unmarried. Salary at the rate of £30 a year, with board and lodging. Also Medical Officer for the Dispensary, unmarried. Salary £180 a year, without board or residence.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Resident House Surgeon. Salary £80, with board, lodging, and laundry.

ROYAL FREE HOSPITAL, Gray's-inn-road, London, W.C.—Senior Resident Medical Officer for twelve months. Salary £100 per annum, with board, residence, and washing.

SHEFFIELD ROYAL HOSPITAL.—House Surgeon for one year, unmarried. Board (exclusive of wine and beer) and lodging provided, and an honorarium of 25 guineas.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY, 189, High-street, Stoke Newington, N.—Junior Resident Medical Officer. Salary for the first three months at the rate of £50 per annum, and afterwards at the rate of £75 per annum, with board and residence in each case.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Resident Medical Officer for one year. Salary £80 per annum, with board and washing.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Professor of Anatomy. Applications to the Secretary and Registrar, University College, Cardiff.

VICTORIA UNIVERSITY—YORKSHIRE COLLEGE, Leeds.—Demonstrator of Physiology. Salary £150.

WEST RIDING ASYLUM, Menston, near Leeds.—Second Assistant Medical Officer. Salary £180, rising £10 annually to £230, with board and apartments.

# Births, Marriages, and Deaths.

## BIRTHS.

BARNES.—On Dec. 13th, 1896, at Wyndham, North-West Australia, the wife of J. Shepperson Barnes, B.A., M.B. Cantab., of a daughter.

DOVE.—On Feb. 15th, at Stapleton-hall-road, Stroud-green, the wife of Percy W. Dove, M.B. Lond., M.R.C.S., L.R.C.P., of a daughter.

MANTLE.—On Feb. 14th, at Savile-place, Halifax, the wife of Alfred Mantle, M.D., of a son.

MUSSON.—On Feb. 15th, at King-street, Clitheroe, the wife of Alfred W. Musson, M.B., B.C. Cantab., of a daughter.

ROWSE.—On Feb. 1st, at Upper Richmond-road, Putney, S.W., the wife of E. Leo. Rowse, M.D., of a daughter.

SIMPSON.—On Feb. 7th, at Whittingham, Preston, the wife of Alexander Simpson, M.D., of a son.

SWINDELL.—On Feb. 11th, at Fairfield, North Finchley, the wife of John J. Swindell, M.R.C.S., of a son.

## MARRIAGES.

LUCE—SCOTT.—On Feb. 11th, at St. Peter's Church, Coverack, Cornwall, by the Rev. Canon Diggins, Vicar of St. Keverne, Richard Harman Luce, M.B., F.R.C.S., of Derby, eldest surviving son of Colonel C. R. Luce, D.L., of Malmesbury, Wilts, to Mary Irene, third daughter of the late John Scott, M.R.C.S., of Westover Villa, Bournemouth.

ACKLAND—MACRORY.—On Feb. 13th, at St. Stephen's Church, Westbourne-park, W., Robert Craig Ackland, M.R.C.S., L.R.C.P., third son of the late Robert Ackland, Esq., of Exeter, to Ruth Kathleen, youngest daughter of Edmund Macrory, Q.C., of Pembridge-square, W., and Duncairn, co. Antrim.

## DEATHS.

POLLOCK.—On Feb. 14th, at Chester-square, S.W., George David Pollock, formerly of Grosvenor-street, W., F.R.C.S., Surgeon-in-Ordinary to H.R.H. the Prince of Wales, and Consulting Surgeon to St. George's Hospital, the last surviving son of the late Field-Marshal Sir George Pollock, Bart., G.C.B., G.C.S.I., in his 80th year.

RANKING.—On Feb. 9th, at Essendene, Leamington, suddenly, James Lancaster Ranking, Surgeon-General late Madras Army, in his 80th year. Indian papers, please copy.

WOOD.—On Feb. 14th, at Ackworth, aged 63 years, George Wood, M.D.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY (22nd).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.). City Orthopædic (4 P.M.). Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

**TUESDAY (23rd).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

**WEDNESDAY (24th).**—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

**THURSDAY (25th).**—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

**FRIDAY (26th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

**SATURDAY (27th).**—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**MONDAY (22nd).**—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Victor Horsley: Traumatic Neurasthenia.—Mr. Hurry Fenwick: Twenty Lumbar Nephrectomies.

**TUESDAY (23rd).**—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. T. S. Ellis: On some Points in the Surgical Physiology of the Foot.

**WEDNESDAY (24th).**—HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8 P.M. Mr. Victor Horsley: Torticollis and its Treatment. (Hunterian Lecture.)

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Papers:—Dr. Pye-Smith: Varicella Bullosa.—Dr. Stowers: Antecedents of, and Sequel to, a Case of Paget's Disease of the Nipple.—Mr. G. Pernet: Recurrent Herpes Zoster, with remarks on Etiology.—Dr. D. Walsh: X Ray Therapeutics in Skin Diseases. Cases: Dr. Payne: (1) Arsenical Keratosis; (2) Pityriasis Rubra.—Dr. T. D. Savill: (1) Raynaud's Disease; (2) Lichen Planus; (3) (?) Lichen Acuminatus. Also cases by Dr. Abraham and others. Dr. Walsh: Dermatitis and Obliterative Phlebitis.

**FRIDAY (26th).**—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. The following cases will be shown:—Dr. S. Coupland: Case of Multiple Subcutaneous Nodules and Bony Growth from the Skull.—Dr. St. C. Thomson: Case of Blood Tumour of the Auricle occurring spontaneously.—Dr. A. Wilson: Case of Dual Consciousness. And other cases. Patients in attendance at 8 P.M.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY (22nd).**—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Law: Examination of the Throat and Nose.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. E. H. Starling: The Changes in the Circulation consequent on Heart Failure. (Arris and Gale Lecture I.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. A. Wynter Blyth: The Law Relating to the Supervision of Food Supply.

SOCIETY OF ARTS.—8 P.M. Mr. C. F. Cross: The Industrial Uses of Cellulose. (Cantor Lecture.)

**TUESDAY (23rd).**—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Melancholia and Hypochondriasis.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Psoriasis.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of Diseases characterised by Discharge from the Ear.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Gowers: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Mr. E. Cotterell: Cases Illustrating the Surgery of the Nervous System.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

**WEDNESDAY (24th).**—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Construction of Dwelling Houses.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Fowler: Clinical Demonstration in the Wards.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. E. H. Starling: The Changes in the Circulation consequent on Heart Failure. (Arris and Gale Lecture II.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—2 P.M. Mr. A. Taylor (conducted by): Inspection and Demonstration in the Parish of St. George's, Hanover-square (number limited).

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—Mr. Paget: Surgical Cases.

SOCIETY OF ARTS.—8 P.M. Sir H. Trueman Wood: Reproduction of Colour by Photographic Methods.

**THURSDAY (25th).**—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: On the Clinical Significance of Proteid Substances in the Urine of Disease.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hutchinson: Clinical Lecture.

SOCIETY OF ARTS.—8 P.M. Prof. J. A. Ewing: The Mechanical Production of Cold. (Howard Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. A. Wynter Blyth: Sanitary Laws and Regulations Governing the Metropolis.

ROYAL INSTITUTION.—3 P.M. Mr. J. W. Gregory: The Problems of Actic Geology.

**FRIDAY (26th).**—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Examination of Air, Soil, and Water.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. St. G. Reid: Methods of Bacteriological Diagnosis (illustrated by lantern demonstrations, &c.).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Gunn: Inflammatory Affection of Optic Nerve, &c.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Dr. F. A. Purcell: Abdominal Surgery for Malignant Disease.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. E. H. Starling: The Changes in the Circulation consequent on Heart Failure. (Arris and Gale Lecture III.)

ROYAL INSTITUTION.—9 P.M. Lieut.-Col. C. R. Conder: Palestine Exploration.

**SATURDAY (27th).**—ROYAL INSTITUTION.—3 P.M. Mr. W. F. Lord: The Growth of the Mediterranean Route to the East.

# Notes, Short Comments, and Answers to Correspondents.

## EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only*, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## "LANTERN LECTURES."

*To the Editors of* THE LANCET.

SIRS,—If "Hygienist" will communicate with me I will give him the information he requires about slides and lanterns for lectures on hygiene and ambulance work.

I am, Sirs, yours truly,

WILLIAM EASBY, M.D. Brux.

Westgate, Peterborough, Feb. 15th, 1897.

*To the Editors of* THE LANCET.

SIRS,—"Hygienist" can obtain full particulars as to hire or purchase of lanterns for lecturing from Messrs. Newton and Co., 3, Fleet-street, Temple Bar, who also have a large supply of lantern slides illustrative of hygiene; from Mr. Walter Tyler, 148, Waterloo-road, S.E.; or from Mr. Luscombe Toms, 78, Queen Victoria-street, E.C., among others. The use of oil or lime-light for the lantern is a matter of importance, depending on the presence or otherwise of gas-fittings in the lecture-room and the experience of the operator. If, when "Hygienist" has applied for details to either of the above firms, I can give him any further advice or assistance I shall be pleased to do so.

I am, Sirs, yours truly,

The Lindens, Putney, S.W., Feb. 15th, 1897. J. GAY.

## "THE UNQUALIFIED ASSISTANT."

*To the Editors of* THE LANCET.

SIRS,—The readers of the THE LANCET will have no difficulty in recognising that your correspondent "A Practitioner" (THE LANCET, Jan. 9th, 1897, p. 148) is but poorly fitted for the *rôle* of reformer either in the medical or any other profession. A more ample acquaintance with historical facts would, granting his capacity to profit from the study of what might tend to extend his power of usefulness, soon convince him that beneficent changes in any direction are not effected by exhibitions of questionable taste or a pyrotechnic display of uselessly harsh expletives. In order to bring him, if only approximately, to a reasonable frame of mind I admit that it would be much better if there were not any unqualified assistants. It also would add to the dignity of the medical profession if some of its members were not, let us say occasionally, guilty of drunkenness, wife-beating, fraud, and neglect. Some have even forgotten themselves so far as to find themselves landed in the criminal dock and convicted—whether rightly or wrongly I leave to "A Practitioner" to decide—of the offences of forgery or criminal abortion. It is sad that such things should occur to mar the fair fame of the noble profession to which "A Practitioner," by dint of unexampled energy, no doubt has succeeded in entering. But, unfortunately, they *do* occur, and to level-headed men do not furnish a pretext for miscalling the *whole* of its members, but rather for feelings of sorrow for poor human nature, its weaknesses and innumerable temptations, through which only the morally strong and prescient can safely steer. It does not necessarily follow that the young man who has wasted or lost for a time his opportunities to master the intricacies of medicine and surgery will, with the aid of the lessons of experience, continue indefinitely to fritter away his time. In a no inconsiderable number of cases students who have wasted their time at college have pulled themselves together, studied hard, qualified, and become useful members of the profession. I know some of that ilk who are now probably as highly qualified and as competent surgeons as your correspondent. On the other hand, how many medical men who were brilliant students have filled the inebriate's grave or misconducted themselves in such a way as to irretrievably blast their career? The fate of the individual, like that of existing social conditions, is inexorably determined by the influence of environment, and if "A Practitioner" wishes to shine as a reformer and extinguish the unqualified assistant he will win greater sympathy in his crusade by treating him with at least some consideration than by ransacking the dictionary for epithets with which to express his obviously ungovernable contempt. Judging from your correspondent's tone he is slightly afflicted with egotism and would have your readers to infer that he is possessed with a monopoly of the love of hard work. He is quite welcome to the flattering self-unction and also to his evidently strong desire to pose as a caustic critic, but I have found that these qualities are not infrequently characteristic of anonymous medical mediocrities who, incapable of otherwise distinguishing themselves, spend their irritatingly ample leisure in penning what cannot by any stretch of the imagination be regarded as either useful, instructive, or ornamental. Of course I am not insinuating that "A Practitioner" comes under this category. Far from it; and I take this opportunity of paying a tribute to his remarkable powers as a writer and dialectitian. I will even go so far as to afford grounds for my respect for the argumentative capacity of "A Practitioner." In one part of his letter he refers to unqualified assistants as "gentlemen," and later designates them as "good-for-nothing idlers." I was not aware, until "A Practitioner" focussed the beams of his transcendent genius on the pages of THE LANCET, that a gentleman could be a good-for-nothing idler. But perhaps your correspondent will favour us with an explanation in your next issue, and still further enhance his reputation as a critic of unqualified assistants and their employers by liberally interlarding his composition with as many adjectives as he can conveniently interpolate in order to give extra polish to the brilliancy of his style. By-the-bye, he expresses surprise that no one has anticipated him in his noble work of "purifying" the profession. He badly wants help, I admit; but I am afraid he will have all the glory to himself, for the majority of practitioners are too busily engaged attending to their duties or are too much impressed by the imperativeness of the time-honoured maxim of "mind your own business" to compete with "A Practitioner" in the elucidation of such portentous themes as "fundamental moral objections."

I am, Sirs, yours faithfully,

ONE OF THE "DAWDLERS."

*S. B. H.*—(1) It is more strictly correct to write on the card Mr. ——, M.D.Brux., but the other method is very commonly followed. Our correspondent will find in THE LANCET of Aug. 17th, 1895, an exposition of our views. (2) We know well the disabilities of the London student, and hope that soon a remedy will be devised for them. (3) Durham.

### IMPROPER PUBLICITY.

A CORRESPONDENT has forwarded us a copy of *Brighton Society*, which contains an open letter to a local medical man. We agree that the publication of such details concerning the merits of a professional man in a lay paper is regrettable. But probably to no one will the silly effusion be more offensive than to the practitioner who is its unhappy victim.

## "HYPODERMIC MEDICATION."

*To the Editors of* THE LANCET.

SIRS,—In reply to your correspondent "Regular Reader" in THE LANCET of Feb. 6th, I can recommend Messrs. Allen and Hanburys' Hypodermic Syringe. Having to give about 400 injections in a year I have used several different instruments, and I can give favourable testimony to the one named in the following respects:—I used one of them during nearly the whole of 1896 daily without anything going wrong with it and without a mishap of any kind. I have just had two more needles fitted to the screw tops, but otherwise the instrument is as good as the day I got it, apparently. This example has the set of the needle to screw into the top of the barrel, and this is an advantage over other appliances that are merely pushed or socketed on, for the reason that the needle section is quite firm, not wearing loose with constant use, never leaking, easily unfastened, and also because it does not force off on pressing the piston sharply, as when one rinses the barrel out with water after use. If the needle is accidentally forced out either into a vessel or otherwise a needle is done for, as many users must have experienced. The piston arrangement ensures never failing equability of resistance, and remains constantly lubricated, and on the whole sterilising can be carried out quite easily and effectually. Some instruments are now made for sterilising chiefly and have little to recommend them in other respects. With ordinary cleanly precautions, and by sterilising very occasionally, I have had no untoward effect follow the use of an Allen and Hanburys' syringe after some 400 applications of it, using the same instrument and the same needles. If sensible asepticity is observed, and a good rinsing with water before and after use, there will be little to trouble about. In reply to the second question, tabloids are certainly the best form of hypodermic medication. They are convenient to store and handle, they will keep a long time while solutions soon go wrong, they ensure uniform dosage, and, when dropped into the barrel of the instrument after water has been drawn in they are the most expeditious and all-round satisfactory form. I find Burroughs, Wellcome, and Co.'s the best, being uniform in dosage and more readily and completely soluble.

I am, Sirs, yours faithfully,

Buckhurst Hill, Feb. 6th, 1897. HAYDN BROWN.

*M.B., F.R.C.S.*—We fear that nothing can be done. The dissemination of such circulars does not constitute "infamous conduct in a professional respect," and would not be punished by the General Medical Council.

### MR. CRITCHLEY, PHILANTHROPIST.

THE *Bristol Times* of Feb. 12th contained the following paragraph:—

> "An inquest was held at Stroud yesterday on the body of Mary Smith, an elderly woman, wife of a carpenter, who died after a day's illness on Tuesday evening. It appeared that she had suffered from heart weakness and stomach trouble for a long time, and that she had taken medicine and used ointment supplied by a man named Critchley, who was neither doctor nor chemist. The ointment was rubbed in over deceased's heart on the day of her death. Critchley was called as a witness. He said he had no qualifications and did not profess to be a medical man. He was a philanthropist, though he made small charges for the medicine and ointment in some cases. A doctor, who was called in after death, said the medicine and ointment were innocuous. The jury returned a verdict of 'Death from natural causes,' adding that a medical man ought to have been called to deceased."

It is not our idea of philanthropy to step between a dying woman and proper medical advice with a potion and an ointment, however innocuous. Mr. Critchley is recommended to seek another outlet for his overflowing love for distressed humanity before he gives a coroner's jury an opportunity of censuring him or worse.

*Dr. Harold N. Moyer* is thanked for his communication.

## "DR. RENTOUL'S EXPENSES FUND."

*To the Editors of* THE LANCET.

SIRS,—The following is a second list of subscriptions to the above fund. May I ask intending subscribers to send their donations at once and allow the fund to be closed at an early date?

I am, Sirs, yours faithfully,

Gateshead, Feb. 16th, 1897. ALFRED COX, M.B. Durh., Hon. Sec.

| | £ | s. | d. |
|---|---|---|---|
| E. N. Adeney, Tunbridge Wells ... ... ... ... | 0 | 2 | 6 |
| Thos. Aitchison, Willington Quay ... ... ... ... | 0 | 10 | 0 |
| J. F. Armstrong, South Shields ... ... ... ... | 0 | 10 | 6 |
| M. Baines, London, S.W. | 0 | 10 | 0 |
| E. Barker, Sheffield ... ... | 0 | 5 | 0 |
| S Barnett, Leominster ... | 0 | 5 | 0 |
| J. W. Batterham, St. Leonards-on-Sea ... ... | 0 | 5 | 0 |
| J. Bevan, Mumbles ... ... | 0 | 5 | 0 |
| W. F. Brook, Fareham ... | 0 | 10 | 6 |
| J. Broom, Clifton, Bristol | 0 | 10 | 6 |
| E. H. Case, Fareham ... | 0 | 10 | 6 |
| Kilner Clarke, Huddersfield ... ... ... ... ... | 0 | 10 | 0 |
| Thos. Collier, Sheffield ... | 0 | 10 | 0 |
| A. Court, Staveley, Chesterfield ... ... ... ... | 0 | 5 | 0 |
| Harold Dunderdale, Blackpool ... ... ... ... | 1 | 1 | 0 |
| A. E. C. Harris, Birkenhead | 1 | 1 | 0 |
| Kidderminster Medical Society, per J. L. Stretton ... ... ... ... | 2 | 2 | 0 |
| B. Marshall, Atherton ... | 1 | 1 | 0 |
| R. McCraith, Liverpool ... | 0 | 10 | 6 |
| N. F. R. ... ... ... ... ... | 0 | 5 | 0 |
| Frank Pearce, Brighton... | 1 | 1 | 0 |
| F. W. Pearce, Brighton... | 1 | 1 | 0 |
| J. G Shea, Chesterfield .. | 0 | 10 | 0 |
| W. Smith, Gateshead ... | 0 | 5 | 0 |
| J. L. Speirs, Gateshead ... | 0 | 10 | 6 |

## "ANTISEPTIC MIDWIFERY."

*To the Editors of* THE LANCET.

SIRS,—From the letter of Mr. J. J. Harding in THE LANCET of Feb. 13th and from other letters which I have read I regret to find that a sentence in my address on this subject is misleading. It is that quoted by Mr. Harding, "Why the sublimate treatment should not be adopted in private practice as well as in hospitals I am at a loss to understand." I did not mean to imply that the sublimate is not largely employed in general practice. It would have been better had I expressed myself thus: "Why the sublimate treatment should not be *universally* adopted in private practice I am at a loss to understand." I have received a large number of letters from all parts of the country since the publication of my address from general practitioners asking me where copies of the lecture I delivered in 1887 giving instructions regarding the use of the sublimate in midwifery practice can be obtained. I do not believe that it is employed at all generally in private practice. If I am mistaken I shall be only too pleased to acknowledge my error. My opinion has been derived from inquiries among medical men I meet in consultation and otherwise.

I am, Sirs, yours obediently,

Grosvenor-street, W., Feb. 15th, 1897. CLEMENT GODSON.

*Paterfamilias.*—Water that has been boiled is just as suitable for drinking purposes as unboiled water. There is no necessity to boil water unless it is suspected to contain organic impurities. The chief drawback to boiled water is its insipidity and lack of briskness. As to milk, the evidence of clinical experience does not justify the belief that its nourishing qualities are altered to any important extent by careful boiling. It has been asserted that completely sterilised milk, if it is administered without a fresh food, will sooner or later produce scurvy. Milk, however, kept within ten degrees of boiling point for ten minutes is said to be free from pathogenic organisms, while it will not cause scurvy.

### A MILLIONAIRE'S EXTRAVAGANCE.

THE *English Illustrated Magazine* for February publishes the following in an article entitled "The Extravagances of a Millionaire":—

> "An example of extravagance is the case of a well-known millionaire who built himself a castle in one of the Midland counties. The water of the place was pure and sufficient, but a case of scarlet fever occurring in the village at a little distance from his residence, he took a dislike to the local water supply, and at a cost of over £80,000 provided himself with a fresh supply from a distance of eighteen miles. Without children or wife, and a great traveller, he does not inhabit his own country place for more than three months in the year. Although he drinks no wine, his water is an expensive beverage. Allowing only 3 per cent. on the money with 1 per cent. sinking fund, his water costs him £50 for every day he visits his castle. This supply, it should be added, is limited to the one house. There is really no reason why it should be shared with others, for, as I have said, the local supply is ample and of good quality."

*Puzzled.*—The society is not one, so far as we know, which has deliberately set itself against the medical man, but the absence of wage limit condemns it in our eyes. If our correspondent will send us a copy of the rules we shall be able to answer the question more in detail. Are canvassers employed in such a way that the officer of the society lives upon patients obtained by touting from his fellow practitioners?

## THE BENEFACTIONS OF JOHN BANCKS.

*To the Editors of* THE LANCET.

SIRS,—By two indentures, dated May 12th, 1619, John Bancks, citizen and mercer, granted to the Mercers' Company about six acres of land at Holloway, in the Parish of Islington, subject to the following conditions:—"That the wardens and commonalty of the Mercers, and their successors should, for ever, after the decease of the said John Bancks, yearly, for ever, pay and dispose all the said monies, so from time to time, to be paid and delivered to them, as aforesaid, to the purposes following ..... Also to the Company of Barber-Surgeons 20*s.* yearly to be distributed on the 11th day of May, yearly, to twelve poor householders or widows of the said Company." The Barber-Surgeons' share of the rents was about one-twentieth. These "about six acres" (as certified by the Charity Commissioners in 1821) are doubtless now covered by houses, &c. Please tell us in your "Charity" column how much is received yearly by the Royal College of Surgeons as their share of the total rental, which must amount to some thousands of pounds per annum, also how this share is distributed. Perhaps it may interest some of your readers to be reminded that John Bancks' daughter married Waller the poet.

I am, Sirs, yours faithfully,

Jan. 27th, 1897. C. J. B.

*** The Royal College of Surgeons of England is not in receipt of any money from this fund to the best of our belief. The Company of Barber-Surgeons is still in existence, and most probably receives the 20*s.* to which by our correspondent's letter it appears to be entitled.—ED. L.

## GALVANIC DILATION OF EUSTACHIAN STRICTURES.

*To the Editors of* THE LANCET.

SIRS,—May I be permitted to point out that the "New Method of Dilating Strictures of the Eustachian Tube by Means of the Galvanic Current," which appeared in the *New York Medical Journal* of Jan. 16th, and by a rare coincidence is omitted from the Table of Contents of that journal, and is referred to in THE LANCET of Feb. 13th, is the method practised by the late Dr. W. B. Steavenson ten years ago and fully described by him in "Electrolysis in Surgery," p. 98 (J. & A. Churchill, 1890).

I am, Sirs, yours truly,

Mansfield-street, W. W. S. HEDLEY.

## WANTED A CONVALESCENT HOME.

*To the Editors of* THE LANCET.

SIRS,—Can any of your readers inform me of a convalescent home where two patients could be received for the summer months—a lady and daughter, both affected with pulmonary tuberculosis, but well enough to dine at table and to take gentle exercise. They can afford to pay from two to two and a half guineas per week, but would require medical supervision. An elevated inland situation is desirable.

I am, Sirs, your obedient servant,

Montreux, Switzerland, Feb. 15th, 1897. TUCKER WISE, M.D. Brux.

## WANTED A SUGGESTIVE OPINION.

*To the Editors of* THE LANCET.

SIRS,—I should be much obliged if any of your readers could give me hints for the treatment of the following case. The patient, aged four years, suffers from constantly recurring ulcers of the tongue, which commence near the tip and gradually creep over the dorsum in the form of a ridge, fusing together where they meet. The child seems irritable a day or two before they make their appearance, otherwise he is in good health. He has an attack at least every month, and this state of things has lasted since birth.

I am, Sirs, yours truly,

Feb. 15th, 1897. C. B.

## "A THROAT IRRIGATOR."

*To the Editors of* THE LANCET.

SIRS,—A throat irrigator practically identical with that described by Dr. Leonard Wilde in THE LANCET of Feb. 13th has been in use by me for many years, and is figured at page 171 in my work on "Diphtheria and its Associates," published in 1895. The only difference is that the ball in mine contains a larger quantity of fluid—six ounces instead of three or four—and this appears to be an advantage, since this is as much as is ever likely to be necessary for an irrigation without the trouble of recharging. The instrument is manufactured by Messrs. Mayer and Meltzer.

I am, Sirs, yours faithfully,

London, Feb. 15th, 1897. LENNOX BROWNE.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Feb. 18th, 1897.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Dry Bulb | Wet Bulb. | Solar Radia in Vacuo. | Maximum Temp. Shade. | Min. Temp | Rainfall. | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Feb. 12 | 30·18 | E. | 40 | 38 | 49 | 44 | 39 | .. | Overcast |
| ,, 13 | 30·06 | S.W. | 42 | 40 | 52 | 51 | 40 | 0·06 | Overcast |
| ,, 14 | 30·05 | W. | 50 | 48 | 64 | 54 | 42 | ... | Cloudy |
| ,, 15 | 30·26 | N. | 48 | 47 | 49 | 49 | 47 | 0·03 | Overcast |
| ,, 16 | 30·61 | S.W. | 41 | 38 | 50 | 47 | 40 | ... | Foggy |
| ,, 17 | 30·53 | S.W. | 38 | 37 | 64 | 50 | 37 | ... | Foggy |
| ,, 18 | 30·32 | S.W. | 41 | 40 | 78 | 48 | 36 | ... | Hazy |

**During the week marked copies of the following newspapers have been received:**—*Keighley News, Halifax Guardian, Forfar Herald, Oldham Standard, Le Courrier de la Presse, Herne Bay Argus, Rochester Journal, Bedfordshire Independent, Manchester Guardian, Newcastle Journal, Times of India, Sheffield Telegraph, North British Daily Mail, Hull News, Devon Gazette, Dundee Courier, Pioneer Mail, Evesham Journal, Architect, Liverpool Daily Post, Wolverhampton Chronicle, Banffshire Advertiser, Builder, Lynn Advertiser, Bradford Observer, Cape Argus, Leeds Mercury, Wilts Standard, Oxford Journal, Carlisle Express, Pullin's Kent Argus, Leicester Post, Portsmouth Times, Hampshire Telegraph, Torquay Times, Western Morning News, Bristol Mercury, Liverpool Courier, Yorkshire Post, Scarborough Evening News, Oban Times, Brighton Observer, Somerset County Herald, Sussex Daily News, Scotsman, Sanitary Record, Willesden Chronicle, Local Government Chronicle, City Press, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Dorset and Somerset Standard, Reading Mercury, Mining Journal, Chard and Ilminster News, Local Government Journal, Surrey Advertiser, Scarborough Post, Richmond and Twickenham Times, Reynolds's Newspaper, Kentish Gazette, Guy's Hospital Gazette, Wexford Independent, Pontefract Advertiser, Eastern Mercury, &c., &c.*

## Communications, Letters, &c., have been received from—

A.—Mons. J. Astier, Paris; Messrs. Armbrecht, Nelson and Co., Lond.; Adjuvans, Lond.; Messrs. Armour and Co., Lond.; Acme Insurance Co., Lond.; Mr. A. R. Anderson, Nottingham; Mr. A. Aitkens, Stowmarket.

B.—Dr. C. K. Bowes, Herne Bay; Mr. T. H. Brocklehurst, Weymouth; Bristol Medico-Chirurgical Society, Hon. Sec. of; Bradford Medical Society, Reporter of; Dr. A. G. Bateman, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Bristol Hosp. for Sick Children, Sec. of; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. H. Butterfield, Northampton; Bristol Eye Hosp., Matron of; Surg. R. F. Bate, H. M. S. *Halcyon*, Channel Squadron; Messrs. Blondeau et Cie, Lond.; Dr. S. A. Bontor, Great Berkhamsted; Mr. J. Blomfield, Lond.

C.—Mr. D. F. B. Cotes, Burton-on-Trent; Cambridge Medico-Ethical Society, Hon. Sec. of; The Cox Thermo-Electric Co., St. Albans, Managing Director of; Mr. W. P. Cox, Leicester; Messrs. Crossley, Moir, and Co., Lond.; Mr. W. Carter, Calcutta; Mr. C. A. Colmer, Weymouth; Cellular Clothing Co., Lond.; Dr. Craig, Blackpool; County Borough, Medical Officer of Health of.

D.—Derby Borough Asylum, Med. Supt. of; General Dashwood.

E.—Mr. E. Englehardt, Lond.; Express Tea Co., Lond., Manager of.

F.—Dr. R. N. Fox, Lond.; Mr. F. Flannery, Eastbourne; Dr. E. B. Fuller, Cape Town.

G.—Sir J. A. Grant, Ottawa, Canada; General Infirmary (The), Leeds, General Manager of; Glasgow Maternity Hosp., Sec. of; Mr. G. B. Gaston, Bedford; Dr. T. B. Grimsdale, Liverpool, Surg.-Maj.-Gen. Gore, Lond.

H.—Mr. Herbst, Lond.; Mr. J. Hart, Lond.; Mr. A. Hodge, Bowdon; Hunterian Society, Lond., Hon. Sec. of; Mr. J. Heywood, Manchester; Mr. C. E. Harrington, New York; Mr. T. Garrett Horder, Cardiff; Dr. Hime, Bradford.

J.—James, Leicester; *Journal de Médecine de Bordeaux*, Editor of; Mr. W. Jones, Cardiff.

K.—Mr. B. Kühn, Lond.; Mr. E. King, Lond.; Herr S. Karger, Berlin; Killaloe, Lond.; Mr. A. Kinsey-Morgan, Bournemouth; Mr. J. Keyle, Birmingham; Dr. Norman Kerr, Lond.

L.—Dr. W. Leask, Birkenhead; Mrs. Leggett, Birkenhead; Liverpool Royal Infirmary, Sec. of; Liquor Carnis Co., Aston Clinton.

M.—Mr. H. M. N. Milton, Cairo; Mr. A. R. McFarlane, Lond.; Manchester Children's Hosp., Sec. of; Mr. J. Milne, Lond.; Messrs. H. Marshall and Sons, Lond.; Male and Female Nurses' Benefit Assn., Lond., Sec. of; Mr. H. Milton, Venice; Messrs. Munn and Co., New York, U.S.A.; Messrs. Macmillan and Co., Lond.; Maltine Manufacturing Co., Lond.; Medical, Lond.; Dr. L. Molloy, Blackpool; Dr. H. N. Moyer, Chicago.

N.—Capt. W. Noble, Uckfield; National Telephone Co., District Manager of.

O.—Mr. F. A. Osborn, Dover; Mrs. Oates, Castle Hedingham; Lt.-Col. M. M. Tufnell Oakes, Kilkeel, co. Clare.

P.—Dr. Margaret E. Pearse, Plaistow; Plymouth Medical Society, Hon. Sec. of; Mr. F. Penberthy, Lond.; Price's Patent Candle Co., Lond.; Messrs. Pickering and Chatto, Lond.; Mr. R. B. Popham, Lond.; Dr. R. Pratt, Leicester.

R.—Mr. H. J. Rice, Sandbach; Rentoul Expenses Fund, Gateshead-on-Tyne, Hon. Sec. of; Mr. A. T. Rimell, Wargrave; Mr. D. S. Rees, Lond.; Herr C. Ricker, St. Petersburg; Dr. E. D. Rowland, New Amsterdam, British Guiana; Royal Surrey County Hosp., Guildford, Sec. of; Rochdale and District Medical Society, Hon. Sec. of; Royal College of Surgeons in Ireland, Dublin, Registrar of; Royal Meteorological Society of London, Asst. Sec. of.

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